BOARD OF COUNTY COMMISSIONERS FOR ADAMS COUNTY, STATE OF COLORADO

RESOLUTION APPROVING APPLICATION FOR SUPPLEMENTAL ENVRIONMENTAL PROJECT FUNDS THROUGH THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND THE ENVIRONMENT FOR ADAMS COUNTY ENERGY CHALLENGE

Resolution No. 2014-110

WHEREAS, the County of Adams, State of Colorado (County) will be applying for a Supplemental Environmental Project (SEP) consideration through the Colorado Department of Health and the Environment (CDPHE) for funding for the Adams County Energy Challenge,

WHEREAS, the County is requesting \$105,000 to fund the Adams County Energy Challenge, which is designed to help residents improve the comfort of their homes while saving money and reducing energy use.

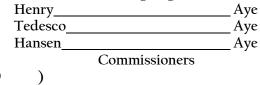
WHEREAS, authority exists in law and funds have been budgeted, appropriated and otherwise made available through the Colorado Department of Public Health and the Environment to fund projects that benefit public health and/or the environment;

WHEREAS, the application for SEP funds is due on February 20, 2014; and,

NOW, THEREFORE, BE IT RESOLVED, by the Board of County Commissioners, County of Adams, State of Colorado, that the application for the Adams County Energy Challenge, a copy of which is attached hereto and incorporated herein by this reference, is hereby approved.

BE IT FURTHER RESOLVED the Chairman of the Board of County Commissioners is authorized to sign the aforementioned Grant Agreement.

Upon motion duly made and seconded the foregoing resolution was adopted by the following vote:



STATE OF COLORADO County of Adams

I, <u>Karen Long</u>, County Clerk and ex-officio Clerk of the Board of County Commissioners in and for the County and State aforesaid do hereby certify that the annexed and foregoing Order is truly copied from the Records of the Proceedings of the Board of County Commissioners for said Adams County, now in my office.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said County, at Brighton, Colorado this 24th day of February, A.D. 2014.

County Clerk and ex-officio Clerk of the Board of County Commissioners Karen Long:



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Deputy

Appendix A: Supplemental Environmental Project Application COVER SHEET

Project Title:	Adams County Energy Challenge		
Organization:	Adams County		
Address:	4430 S. Adams County Parkway		
City, State, Zip:	Brighton, CO 80601		
E-Mail Address:	adorsey@adcogov.org Website Address: www.adcogov.org		
Phone Number:	720-523-6287		
Fax Number:			
Federal Tax Iden	tification Number: 84-6000732		
Legal Tax Status	(check one):Nonprofit*X_Governmental Entity/School		
*If no	nprofit, you must attach a copy of your IRS tax exempt letter to this SEP Application		
in accordance with t the best of the appli understands that kn	itting this application, the applicant agrees to operate the program as described in the SEP Application and he Department's SEP Policy. The applicant agrees that the information provided in this application is, to cant's knowledge and based on reasonable inquiry, true, accurate, and complete. The applicant owingly submitting any false information on this application could result in the project not being ng or voiding any current or future contracts with the Department of Public Health & Environment.		
Print name of Aut	norized Official: Charles "Chaz" Tedesco		
Signature of Author *Please insert elect into the box on the	etronic signature		
Date: 2/18/14	Title: <u>Chairman of the Board of Commissioners</u>		
Project Manage	er or Main Project Contact:		
Name: Adrienne	e Dorsey Title: Sustainability Coordinator		
	Adams County Parkway, Brighton, CO E-Mail: adorsey@adcogov.org		
Phone: 720-523	-6287		
	mount of SEP Funds Requested:\$100,000/atching/In-Kind Contributions:\$5,000Total Project Cost:\$105,000		
Please check on			
Tier 1 Applicati (NE Denver/Comm Tier 2 Applicati (Other areas of De	erce City)		

Appendix B:

SUPPLEMENTAL ENVIRONMENTAL PROJECTS (SEP) APPLICATION TEMPLATE

Project Title	Adams County Energy Challenge
Geographical Area to Benefit Most Directly From Project	The Adams County Energy Challenge will benefit residents living in both Tier 1 and Tier 2 neighborhoods, including those living in Commerce City, unincorporated Adams County, Thornton, Northglenn, Westminster, Federal Heights, and Arvada. The project boundaries extend from Tower Road to the east, Sheridan Boulevard to the West, 120 th to the North, and the Adams County border to the south. A map of the geographic area is included in Appendix A.
SEP Category	x Pollution Prevention Pollution Reduction Environmental Restoration and Protection Environmental Education and Training Public Health
Project Summary	Adams County is requesting Supplemental Energy Project (SEP) dollars to fund the Adams County Energy Challenge, a program designed to help residents reduce energy use, save money, and improve the comfort of their homes. Using SEP dollars, the county would hire a contractor to staff a call center with Energy Advisors that would help homeowners identify and prioritize energy saving improvements and take the steps to make those improvements. SEP funds would also be used to engage the community and offer incentives for energy upgrades, as often costs for energy upgrades are prohibitive for homeowners. The program would target enrollment of 200 total households; if successful in meeting that target, an estimated 72,612 kWh and 22,303 therms would be saved and an estimated 160 metric tons of pollution in the form of greenhouse gas emissions will be prevented from being released into the atmosphere. Implementation of this program will result in pollution prevention, reduced dependency on traditional energy sources, and the conservation of natural resources through increased energy efficiency. This project is in alignment with the county's Sustainability Program vision, which seeks to establish a balance between the economic, community, and environmental health of the county.

<u>Problem Statement</u>: The average single family home emits 7.268 metric tons of CO2 equivalent annually, according to statistics from the Environmental Protection Agency. The consumption of energy resources not only impacts the availability of natural resources, it also threatens our energy independence and pollutes the air, increasing the risk of asthma and other respiratory-related illnesses. If SEP funds are awarded for the Adams County Energy Challenge program, a total of 200 households would have access to Energy Advisors that would help them learn more about energy saving opportunities as well as gain access to rebates that can help offset costly energy upgrades. If successful in enrolling 200 homes in the program, an estimated 72,612 kWh and 22,303 therms would be saved, and an estimated 160 metric tons of pollution in the form of greenhouse gas emissions would be prevented from being released into the atmosphere.

Adams County piloted an Energy Challenge program during the fourth quarter of 2013 with the intent of replicating the very successful Denver Energy Challenge and Boulder EnergySmart programs, which have enrolled a combined total of over 18,000 households. At the end of the county's Energy Challenge pilot, a total of 26 households had enrolled in the program and, through upgrades completed, prevented 4.26 metric tons of CO2 equivalent from being released into the air, reduced energy use by 695 kWh, and leveraged \$600 in rebates from Xcel Energy. However, funding for continuation of the program was not approved in the 2014 budget due to lower than expected enrollment, so the program closed at the end of 2013. The low enrollment numbers were largely a result of inadequate community engagement and a lack of available incentives, both of which will be addressed if SEP funds are awarded for reinstatement of the Adams County Energy Challenge program.

Project Description

If SEP funding is awarded, the county will reinstate a larger, more robust Energy Challenge program with enhanced efforts to educate, engage, and incentivize residents to get involved. With the reinstatement of the program, staff will be able to capitalize on two new opportunities that did not exist during the pilot phase of the program, including a newly developed minor home repair program for low-income residents implemented by the county's Community and Neighborhood Resources section and a partnership with Groundwork Denver that offers in-home Energy Advising services. The Adams County Energy Challenge program will serve to complement these existing programs by offering an overthe-phone Energy Advising service that is available to all residents within the defined geographic area, regardless of income. Groundwork Denver and Adams County will work together to ensure that residents get the best service available to them; Adams County will refer phone clients who need greater financial assistance to Groundwork Denver and Groundwork Denver will refer those who desire a phone consultation to Adams County.

<u>Goals/Objectives</u>: The goals of this project are to conserve natural resources by helping residents reduce their energy use, reinvest private funding back into the local economy, and prevent pollution in the form of greenhouse gases from being emitted into the atmosphere. Adams County realizes that we all play an important role in a shared energy future and by completing this project we will be helping our residents conserve valuable, shared natural resources, reduce dependency on traditional energy sources, and help prevent pollutants from being released into the air.

The objectives of this project are to:

- Enroll 200 households within the defined geographic area indicated in Appendix A in the Energy Challenge program.
- Provide \$50,000 in the form of incentives, such as rebates to help residents cover

	 the costs of energy upgrades, to be administered by the contractor hired to staff the Energy Advising call center. An example of possible incentives we will offer through the Adams County Energy Challenge can be found in Appendix B, which includes a list of rebates offered through Boulder's EnergySmart program. Hire a contractor to staff a call center with Energy Advisors that would help homeowners identify and prioritize energy saving improvements and take the steps to make those improvements. Advisors are unbiased, third-party experts who provide education and information about energy saving improvements, connect homeowners with local contractors, assist with any applicable incentives, and provide support and guidance throughout the entire home upgrade process. Reduce energy use by an estimated 72,612 kWh and 22,303 therms Prevent an estimated 160 metric tons of pollution in the form of greenhouse gas emissions from being released into the atmosphere.
	Project Tasks and Activities: The proposed project will involve the following tasks:
	 Hire third party contractor to staff call center with Energy Advisors and administer incentives; the Advisers will help homeowners identify and prioritize energy saving improvements and take the steps to make those improvements. Create list of energy efficiency incentives for households enrolled in the program to access as well as eligibility requirements for accessing incentives as well as guidelines for administration of the incentives from the contractor. Develop webpage on county website to market the program. Develop marketing materials and other community engagement efforts to engage residents. Distribution of marketing materials will be done jointly with Groundwork Denver, Xcel Energy, and United Power (where applicable). Monitor monthly enrollment reports to track involvement, energy reduced, dollars reinvested into the local economy, and pollution prevented from being emitted into the atmosphere.
2	Technical information: Please find a map highlighting the geographic area in Appendix A.

	The expected environmental and public health benefits as a result of the reinstatement of the Adams County Energy Challenge are many. Through the enrollment of 200 households in the program, an estimated 72,612 kWh of electricity and 22,303 therms of gas will be saved, resulting in the conservation of limited resources, while 106 metric tons of CO2 equivalent will be prevented from being released into the atmosphere, helping to improve air quality and mitigate the impacts of climate change. All calculations are based on numbers recorded through Denver's Energy Challenge program, which also offers over-the-phone Energy Advising services. The Adams County Energy Challenge would be nearly identical Denver's Energy Challenge; our program would simply exist on a smaller scale. Please see a more detailed overview of calculations in Appendix C.
Expected Environmental and/or Public Health Benefits	The anticipated reduction in metric tons of CO2 released into the air is especially important, because a recent study indicates that CO2 emissions contribute to climate change, but also increase the rate of deaths caused by respiratory illness and asthma in the United States. The paper, written by Mark Jacobson (Science Daily 2008), details how "for each increase of one degree Celsius caused by carbon dioxide, the resulting air pollution would lead annually to about a thousand additional deaths and many more cases of respiratory illness and asthma in the United Statesupward of 20,000 air-pollution-related deaths per year per degree Celsius may be due to this greenhouse gas."
	Finally, the Adams County Energy Challenge program not only helps residents identify and implement energy-saving measures, it also encourages conversations amongst neighbors and community members about what being energy efficiency means and why it's important. By communicating with and educating residents and other constituents in the county about energy efficiency, people begin to become more aware of their energy usage and the impact it has on both our natural resources as well as our public health.
Project	The Adams County Energy Challenge program has strong potential for successful and measurable results. Based on the success of both the Denver Energy Challenge and Boulder EnergySmart programs, as well as the learning experience we gained by piloting a small version of the program in 2013, staff is confident in the successful outcome of the project. Further, the potential for measurable results is strong, as staff will review monthly enrollment reports indicating household involvement, energy offsets, reinvestment in the local economy, and pollution prevention. Below is a breakdown of how outcomes will be measured:
Evaluation and Measurable Results	 -Monthly household enrollments will be monitored along with energy and greenhouse gas reductions. A successful outcome of the program will involve the enrollment of 200 households with a minimum of 70% completing energy upgrades. -Total combined reduction of 72,600 kWh in energy, 23,300 therms, and 160 CO2 equivalent prevented from being released into the atmosphere. -Use of all rebate dollars for energy upgrades. -Interest from residents to continue and/or expand the program into other parts (or the whole) county.
	Project results will be communicated on the county's website as well as through local news sources where available.

The feasibility of successful implementation for this project is high as the concept is modeled off two successful programs in place in neighboring counties (i.e. Denver Energy Challenge and Boulder's EnergySmart) and staff gained insight into the strengths and weaknesses of the program when it was piloted in 2013. The weaknesses of the program (i.e. inadequate community engagement and incentive offerings) will be addressed with the reinstatement of the program, should SEP funds be awarded. The program will also build upon existing complementary programs already in place by the county's Neighborhood and Community Resources Division as well as Groundwork Denver.

Feasibility of Successful

Implementation

Further, the Energy Advising model is scalable and easily integrated with existing complementary programs within the community, making the potential for a viable, sustainable, and possibly expanded program high. Ultimately, the county would like to expand the program to all residents.

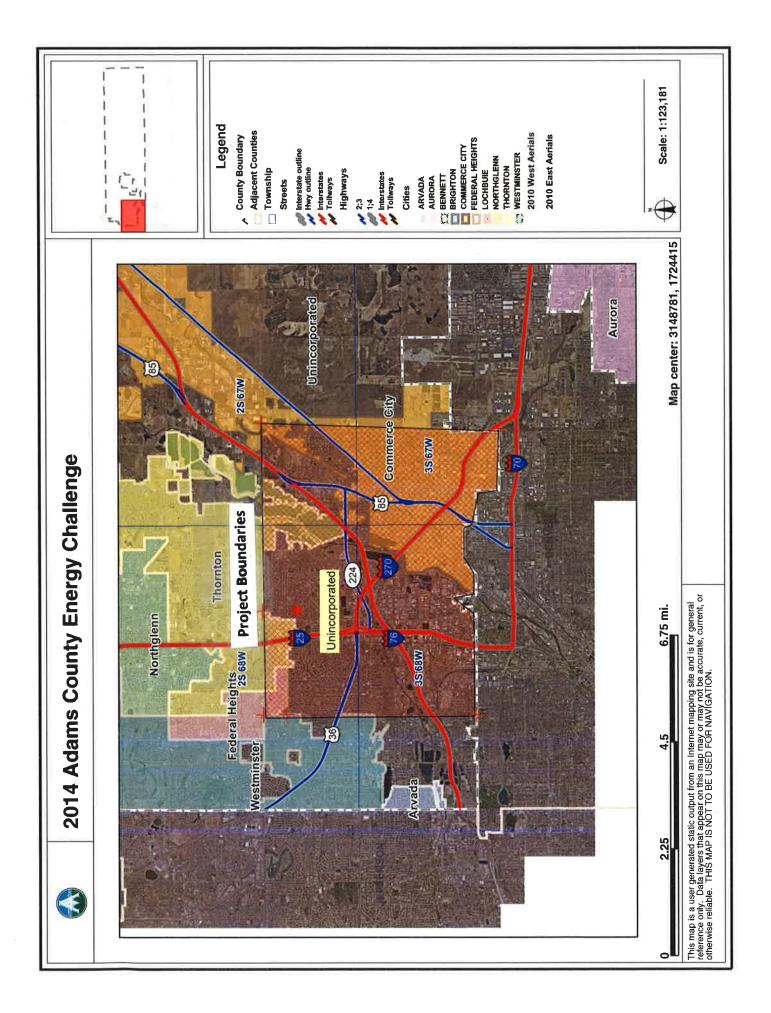
	Budget Category	Description		SEP Cost	Matching or In-kind Funds	Total Cost
	Personnel (Salaries, Wages)	125 in-kind hours of staff tin + 35% fringe benefits	ne at \$30/hr		\$5,000	\$5,000
Project	Materials and Supplies					
Budget	Major Equipment					
Contractors/ Subcontractors Third party contractor to staff call center \$48,000				\$48,000		\$48,000
	Other Direct Costs	Community Engagement and	l Incentives	\$52,000		\$52,000
	a		Total:	\$100,000	\$5,000	\$105,000
Budget Discussion					the count Populus in marketing ose offered	
	including 3) Staff tim	g costs for flyers, advertisen ne was figured at approxim ing, and advertising the pro	nents, and otl ately 8 hours	her educatio s per week	nal efforts. spent on imp	plementing
Project		Activities	Staff F	Responsible		Date
Schedule/	Finalize Sco	pe of Work for project	Sustainabi	lity Coordina	ator July 2	.014

Work Plan	Send out bid for contractor to staff Energy Advising Call Center & administer incentives	Sustainability Coordinator, Purchasing Department	July 2014			
	Select/hire contractor	Sustainability Coordinator, Purchasing Department	August 2014			
	Develop and send marketing materials to residents within geographic area	Sustainability Coordinator, Public Information Office	August 2014, January 2015, April 2015, August 2015			
	Create webpage for program on county website	Sustainability Coordinator, Public Information Office	August 2014			
	Post advertisement in local county newspaper	Sustainability Coordinator, Public Information Office	September 2014, March 2015, August 2015			
	Submit status report	Sustainability Coordinator	December 2014			
	Submit status report	Sustainability Coordinator	July 2015			
	Submit final report	Sustainability Coordinator	December 2015			
Experience and Qualifications	Adams County's Sustainability Program has I Sustainability Coordinator, Adrienne Dorsey, ground up since the Program's inception. Th from the county's upper management and B expressed desire in not only advancing susta effectively engaging residents within the cou county. Under Dorsey's leadership, the cour reducing energy use, reducing Greenhouse G landfill by county operations; over the past y engaging the broader community in sustaina the pilot Adams County Energy Challenge pro- has a B.S. in Natural Resources Management Management, a certificate in Sustainability L decade worth of experience in the fields of la sustainability.	has led the effort to build the be Sustainability Program has sto oard of County Commissioners inability initiatives for county of inty as a whole to create a who haty has implemented initiatives Gas emissions, and reducing wa rear, increased attention has be ability initiatives, an example of ogram that was implemented in t, an M.A.S. in Environmental P eadership & Implementation a	program from the trong support , who have operations, but olly sustainable aimed toward ste sent to the een focused on which included n 2013. Dorsey olicy and nd nearly a			

Reporting	 The applicant has reviewed the reporting requirements below and if selected for SEP funding, agrees to adhere to these requirements. Biannual Status Reports The applicant will submit a biannual project status report to the Department's SEP Coordinator. Status reports will be submitted using the Department's template and include the following information: A description of activities completed to date; A budget summary table listing funds expended to date by budget category; and A discussion of any anticipated changes to the project scope or timeline. Final SEP Completion Report The applicant will submit the SEP Completion Report within 30 days of project completion, using the Department's template, and contain at a minimum: A detailed description of the project as implemented; A description of any operating problems encountered and the solutions thereto; A description of any operating problems encountered and the solutions thereto; A full expense accounting including itemized costs, documented by copies of purchase orders, contracts, receipts or canceled checks;
Other Relevant Information	Adams County Mission: To responsibly serve the Adams County community with integrity and innovation. Adams County Vision: To provide our community a safe, healthy environment to work, raise families and build businesses.

Appendix A

Map of Project Site



Appendix B

Example Incentives for Adams County Energy Challenge Program



EnergySmart Residential Rebates

For Homeowners and Ownerships Up To 4 Units

Receive 25% of project cost up to \$250				
Attic Insulation with Air Sealing	R-49 minimum required in open attic; cathedral ceilings will vary with rafter depth. Must perform air sealing in attics prior to adding insulation.			
Wall Insulation	R-19 minimum; fill wall cavity where R-19 not possible.			
Foundation (Basement or Crawl Space) Insulation and Air Sealing	R-13 minimum on foundation walls with a vapor-permeable air barrier over insulation. Must have sealed vapor barrier over dirt crawl space floor and crawl ventilation required, per 2006 IECC.			
Sub-Floor or Frame Floor Insulation	R-30 minimum, over unconditioned space only (i.e., cantilevers, floors over unconditioned crawl, over garage, etc.). Fill enclosed floor cavities when R-30 is not possible.			
Perimeter Insulation, Slab-on-Grade foundations	R-10 minimum. Must extend to entire perimeter of any exposed slab(s).			
Boiler Replacement	AFUE \geq 85%, must be sealed combustion.			
Gas Furnace Replacement	AFUE \geq 92%, must be sealed combustion.			
Whole House Evaporative Cooler	Permanent installations only; temporary or portable units not eligible.			
Energy Star Central Air Conditioner Replacement	14.5 SEER minimum. Requires recycling of existing unit with supporting documentation, where applicable. Window (single room) units do not qualify.			
Whole House Fan	Fan must have an automated, insulated air sealing mechanism that engages when the fan is off (e.g., doors or damper mechanism, etc).			
EnergyStar Electric Heat Pump or Electric Tankless Water Heater	Eligible only if replacing an existing electric storage tank water heater (not electric replacing gas).			
EnergyStar Gas Water Heater	Minimum rating: 0.67 Energy Factor. Includes all gas condensing and on-demand gas tankless systems.			

Version date: 1/1/2014

Appendix C

Calculations

Calculations for Adams County Energy Challenge

Formulas Used

Tons CO2 Saved	(Total_Upgrade_kWh_Savings_	<u> </u>	Metric Tons CO2	((Total_Upgrade_k	Metric Tons CO2 ((Total_Upgrade_kWh_Savings_c*0.0008)	
	+			+		
	(Total_Upgrade_Therm_Savings	herm_Savings_c*0.00532)		(Total_Upgrade_T	(Total_Upgrade_Therm_Savings_c*0.00532))	
				*0.90718474		

Total Homes Enrolled in Time Period	200
Total Homes with Energy Savings	140
Converted in Time Period (Populus average conversion rate in established programs)	70%

Estimated Total %	Estimated Total				Estimated	
Energy Savings per	kWh Savings	Estimated Total Therms	Estimated	Estimated Total Metric Tons	Metric Tons	Estimated Tons
home	per home	Savings per home	Total kWh	Therms	CO2 Saved	CO2 Saved
19	518.66	159.31	72612.4		22303 160.3394669	176.744008

Appendix D

Example Contractor Pricing for Adams County Energy Challenge

Scope of Work

Commencing on January 1, 2014 through December 31, 2014, Populus, LLC will perform the following scope of work for Adams County (either Option A or Option B):

Option A: 100 Homes

Customer Support Services

- Call center services in support of the Energy Challenge, availability to enroll accounts and answer questions from homeowners with regard to the program
- Phone-based energy advisor services for up to 100 homes; Continued energy advisor services to existing service participants
- Data tracking and customer management tracking services for 100 residential accounts plus existing participants, including monthly reporting to Adams County and collection of utility release forms

Description	Unit	Rate
Customer Support Service:	Monthly fee providing capacity for 75 homes a	Base fee of \$1,500 per month
Call Center	year/6-7 homes a month.	
Energy Advisor Services	Additional capacity up to 25 homes a year/2-3	Additional capacity of \$240 per
	homes a month.	home
ANNUAL TOTAL		\$24,000*

Option B: 200 Homes

Customer Support Services

- Call center services in support of the Energy Challenge, availability to enroll accounts and answer questions from homeowners with regard to the program
- Phone-based energy advisor services for up to 200 homes; Continued energy advisor services to existing service participants
- Data tracking and customer management tracking services for 200 residential accounts plus existing participants, including monthly reporting to Adams County and collection of utility release forms

Description	Unit	Rate
Customer Support Service: Call Center	Monthly fee providing capacity for 150 homes a year/12-13 homes a month.	Base fee of \$3,000 per month
Energy Advisor Services	Additional capacity up to 50 homes a year/4-5 homes a month.	Additional capacity of \$240 per home
ANNUAL TOTAL		\$48,000*

*Adams County is responsible for utilizing capacity fully. Additional capacity beyond the scope of work above can be purchased if available. Flat fee is based on a 12 month commitment. A shorter contract equals a higher flat fee per month.