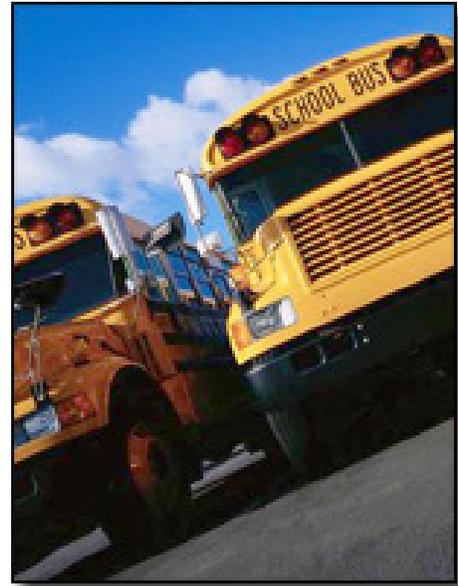


Clean Air Retrofit, Replacement, and Off-Road Technology (CARROT) Program Update January 2016

The Governor's 2017 Budget recommendation includes a request for \$500,000 to continue the CARROT Program. The goal is to continue progress to replace old and inefficient on and off-road equipment with new technology to reduce emissions of air pollutants. The 2017 funding is anticipated to be divided between School Bus, Heavy Diesel and Small Engine replacement projects.

The CARROT Program was enacted during the 2014 legislative session as a means to provide incentives for reducing emissions from vehicles, engines, and equipment that are significant sources of air pollution.

The \$200,000 that was appropriated the first year was divided into two segments: the CARROT grant program and the CARROT Lawn Mower Discount and Exchange program. The CARROT grant program awarded \$100,000 in grants for projects that reduced emissions from heavy-duty diesel engines. The CARROT Lawn Mower Discount and Exchange program provided incentives for individuals to purchase electric lawnmowers at a discounted price and an added incentive for those who exchanged a gasoline lawnmower for an electric mower.



In the 2015 legislative session, the Legislature appropriated \$700,000 for the CARROT program. The program was divided into three segments: the CARROT Grant Program, the CARROT School Bus Replacement Program, and the CARROT Lawn Mower Discount and Exchange Program.

The CARROT Grant Program:

In the seven counties designated as non-attainment for PM_{2.5} in Utah, heavy-duty diesel vehicles, class 5 and higher, travel over 1.4 billion vehicle miles annually, resulting in over 20,500 tons of annual emissions. The following awards totaling \$100,000 for 2015 and \$100,000 for 2016 were made through the CARROT Grant Program to reduce emissions from this group of vehicles:

2015 CARROT Grant Program Awards			
Awards	Project	Amount of Award	Emissions Reductions in Tons (Lifetime)
Jordan School District	School bus replacement	\$30,642	466
Logan City	Retrofit 19 city vehicles with diesel oxidation catalyts (DOC) and diesel particulate filters (DPF)	\$40,000	10.2858
Nibley City	Retrofit three city vehicles with DOCs	\$10,500	0.174
Uintah City	Retrofit one city vehicle with a DOC	\$4,006	0.263
Utah State University	Retrofit a piece of equipment with a DPF	\$14,852	0.09
Total			477

2016 CARROT Grant Program Awards			
Awards	Project	Amount of Award	Estimated Emissions Reductions in Tons (Lifetime)
Americom Technology	Retrofit 10 pieces of construction equipment, engine model years 1992-2006, with exhaust controls and idle-reduction technologies	\$52,273	12,730
Bingham Livestock Transportation	Replace a 1998 long-haul truck	\$20,000	214
Diamond Rentals	Replace two Tier 1 diesel generators with new Tier 4 propane generators	\$16,779	6 to 15
Riley Farms	Replace and repower old diesel farm equipment	\$11,875	28
Minimum Total			12,978

The CARROT School Bus Replacement Program:

As a result of the 2015 legislative appropriation for the CARROT Program, \$300,000 was allocated in 2016 to the CARROT School Bus Replacement Program for replacing old, heavy-polluting diesel school buses for new buses that achieve the cleanest emissions standards.

2016 CARROT School Bus Replacement Awards			
Awards	Project	Amount of Award	Estimated Emissions Reductions in Tons (Lifetime)
Cache School District	Replace one 1993 diesel school bus	\$20,000	6.5
Davis School District	Replace two 1997 diesel school buses	\$50,000	23.36
Granite School District	Replace three 1998 diesel school buses	\$75,000	19.2
Logan School District	Replace one 1993 diesel school bus	\$20,000	7.9
North Sanpete School District	Replace one 2002 diesel school bus	\$25,000	5.3
Piute School District	Replace two, 1993-2001, diesel school buses	\$45,000	18.5
South Sanpete School District	Replace two, 2000-2001, diesel school buses	\$45,000	6
Wayne School District	Replace one 2000 diesel school bus	\$25,000	2
Total			89

The 2015 CARROT Lawn Mower Discount and Exchange Program:

Because annual emissions from one gasoline lawn mower are estimated to be equivalent to emissions from 4,236 vehicle miles traveled, the Department of Environmental Quality encouraged the use of electric-powered lawn mowers by holding its inaugural Lawn Mower Discount and Exchange event on May 2, 2015. The event provided 388 electric lawn mowers at a discounted price of \$175 from the retail price of \$399. If the participant turned in a gasoline mower to scrap, they were able to purchase the new electric mower for \$100.



Utah residents who wanted to participate pre-registered online to reserve one of the 388 available mowers. Approximately 80% of the participants took advantage of the added discount by scrapping a gasoline mower. The outcomes of the program reduced emissions between 3.6 and 11.25 tons per year, depending on variables such as horsepower, load, hours of operation, temperature, and population. This is equivalent to removing 120 passenger cars from Utah roads.

The 2016 CARROT Lawn Mower Discount and Exchange Program

The success of the 2015 Lawn Mower Discount and Exchange Program has encouraged a more robust program for 2016. This year \$300,000 of the CARROT funding has been budgeted to reduce emissions from landscape equipment. It is anticipated that approximately 1,300 pieces of electric-powered lawn equipment will be available at a discounted price to replace dirtier gasoline models. The event will be held in the spring of 2016.