

Electrify Heartland Plan

Appendix J: Electric Vehicle Fleet Tools



Project title: Kansas – Missouri
Community Readiness for EV and EVSE

Funded by: US DOE DE-EE0005551

By: Metropolitan Energy Center
and Kansas City Regional Clean Cities Coalition

With: Black & Veatch





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This work was developed in response to the federal funding opportunity announcement titled Clean Cities Community Readiness and Planning for Plug-in Electric Vehicles and Charging Infrastructure. FOA: DE-FOA-0000451

CFDA Number 81.086



Electrify Heartland Plan

Electrify Heartland Project Abstract

Electrify Heartland is an electric vehicle planning project managed by Metropolitan Energy Center. It is a product of the Greater Kansas City Plug-In Readiness Initiative, co-chaired by Kansas City Regional Clean Cities Coalition. Our goal is to produce a regional plan to prepare public resources and secure the economic and environmental benefits of plug-in vehicles within targeted metro areas with estimated 2.7M population. The targeted metro areas include Kansas City, MO & KS; Jefferson City, MO; Wichita, KS; Salina, KS; Lawrence, KS; and Topeka, KS. (14 Counties: Cass, Clay, Cole, Douglas, Jackson, Johnson, Leavenworth, Miami, Platte, Ray, Saline, Sedgwick, Shawnee, Wyandotte).

Electrify Heartland Steering Committee

Team	Organization	Name
Charging Stations	Initiatives	Troy Carlson
Charging Stations	LilyPadEV	Larry Kinder
Charging Stations	Logios	Gustavo Collantes
Government Policy	Polsinelli Shughart PC	Alan Anderson
Government Policy	Black & Veatch	Bill Roush
Project Administration	Metropolitan Energy Center	Ruth Redenbaugh
Project Administration	Metropolitan Energy Center	Kelly Gilbert
Public Education	Nation Ranch Marketing, Inc.	Bill Patterson
Training	Kansas City Kansas Community College	Bob McGowan
Training	National Electrical Contractors Association	Jim Cianciolo
Utility Grid	Black & Veatch	Sam Scupham
Vehicle & Fleet	University of Missouri at Kansas City	Henry Marsh

Exhibit i-i. Electrify Heartland Steering Committee Members



Table of Appendices

The following appendices are in separate files on www.ElectrifyHeartland.org

- A. EV Readiness Index
- B. Greater Kansas City Plug-in Readiness Strategy
- C. Grant Proposal for Project
- D. EVSE Permitting Recommendations
- E. Federal Highway Administration Signage Memorandum
- F. EV Business Coalition
- G. Automotive Technician Curriculum
- H. Electric Vehicle Infrastructure Training Program promotion
- I. Getting started with EV
- J. Electric Vehicle Fleet Tools
- K. Electric Vehicle Hangtag
- L. EVSE Site Host Considerations
- M. Initial Website Map
- N. Air Quality
- O. EV Ready Communities
- P. Sample Presentations about EV Forecasts and Redirected Spending Potential
- Q. EVSE Corridor Analysis
- R. Blank
- S. Blank
- T. Blank
- U. Social Media
- V. Press Kit
- W. Contributors
- X. Exhibits
- Y. Glossary
- Z. Bibliography



Appendix J: Electric Vehicle Fleet Tools

Synopsis:

This appendix to the Electrify Heartland Plan contains tools for vehicle fleet operators, including sample business cases for electric vehicles and sample fleet policies that prefer alternative fuel vehicles. Where policy documents deal with issues other than alternative fuels, specific paragraphs are shaded to highlight the alternative-fuel component.

Section Authors:

Compiled from City of Kansas City, Missouri, Eckhaus Fleet; Kansas City Area Transportation Authority, Lee's Summit School District R-7; Smith Electric Vehicles; and University of Missouri – Kansas City.



J.1 Model Policies

J.1.1 Model Unit Right-Typing Policy

Purpose:

To establish a standard policy for the right-typing of city owned vehicles and equipment, to establish an approved policy that dictates standards for vehicle & equipment sizes as required for specific job duties, and to establish a policy that dictates the use of smaller vehicles, better fuel economy vehicles, alternative fuel vehicles, and technologies that result in the lowest environmental impact possible.

Policy:

Central Fleet will follow the unit acquisition procedures when determining vehicle replacement types and specifications.

Procedure:

1. The Superintendent of Motor Equipment will meet with divisions and stake holders. Do field visits of job sites. Interview drivers/equipment operators and their supervisors to determine vehicle type, carrying capacity and size.
2. The Superintendent of Motor Equipment will compare job requirements against vehicle size to reduce the purchase of oversized and/or non 4X4 vehicles when smaller and more fuel efficient vehicles would suffice. This will be an active and ongoing evaluation program of current fleet vehicle types to see if smaller vehicles and/or smaller higher mileage engines may fit the need of actual job requirements. The Superintendent of Motor Equipment will compare the total operational cost including miles per gallon and maintenance items such as tires and brakes.
3. The Superintendent of Motor Equipment will perform life-cycle analysis with an emphasis on lower fuel costs, improved air quality, and energy security to determine if an alternative fuel vehicle would be more beneficial over the life of the vehicle. Preference will be given to utilize cleaner alternative fuel vehicles that use the highest percentage content of American sourced fuel.
4. The life-cycle analysis will also consider the use of the lighter construction materials, and the latest technology including but not limited to air disc brakes, steerable third axles, hydraulic assist, and 60/40 truck suspensions. Preference will be given to utilize use of the lighter construction materials, and the latest technology to improve miles per gallon ratings and to lower overall vehicle costs.
5. The Superintendent of Motor Equipment will perform an annual report at the end of each fiscal year with a goal of lowering the fleet miles per gallon average as a result of this policy. Fuel consumption savings will be derived from the use of higher MPG vehicles and/or alternative fuel vehicles.



J.1.2 Model Resolution to Convert Fleet Vehicles to Alternative Fuels

- Whereas,** The _____ (Community) has established a strategic goal of enhancing and promoting environmental sustainability;
- Whereas,** (Electric vehicles) are considered clean fuel alternatives compared to clean diesel technologies;
- Whereas,** Current projections are that (electricity) will be a less costly fuel than diesel well into the future;
- Whereas,** Conversion to (electricity) will require renovations to the fueling and maintenance areas of the vehicle maintenance complex, but even considering the cost of these renovations, the conversion is projected to result in cost savings to (Community);
- Whereas,** The (Community governing body) has carefully considered the implications of converting the (Community) fleet to (electricity) from diesel; now therefore be it
- Resolved,** That the (Community governing body) hereby directs (Community) management:
1. To begin the design and construction projects necessary to convert the vehicle maintenance complex to support (charging electric) vehicles;
 2. To begin the procurement process for securing (electricity) services, including but not limited to, long-range contracts;
 3. To encourage management to determine the feasibility and cost-effectiveness of using (electric drive) in all (Community) vehicles;
 4. Unless otherwise instructed or approved by the (governing body), all future vehicle purchases shall be alternative fuel and should leverage the new (charging) infrastructure as much as feasible;
 5. Pursue federal grants and innovative funding options to expedite the conversion and maximize benefits to (Community); and
 6. Promote partnership opportunities with other community fleet operators in the region and explore the possibility of a regional alternative fuels policy.

In witness whereof,

I have set my hand and the seal of the Authority this [date].

Authorized signature

Authorized signature



J.1.3 Model Ordinance for Environmentally Preferable Procurement

ORDINANCE NO. 990168

Amending Chapter 2 of the Code of Ordinances, entitled Administration, by repealing Section 2-1871, entitled Use and purchasing generally, and enacting in lieu thereof a new section of like number establishing an environmentally preferable procurement policy.

BE IT ORDAINED BY THE COUNCIL OF KANSAS CITY:

Section 1. That Chapter 2 of the Code of Ordinances, entitled Administration, is hereby amended by repealing Section 2-1871 therein, entitled Use and purchasing generally, and enacting in lieu thereof a new Section 2-1871, said section to read as follows:

Sec. 2-1871. Environmentally preferable procurement policy.

(a) *Purpose.* This section shall be known as the Kansas City Environmentally Preferable Procurement Policy. Its purpose is to support markets for recycled and other environmentally preferable products by affirmatively encouraging City departments, offices, agencies and contractors to buy and use such products whenever practicable and to encourage vendors to make such products available in the marketplace. It is the City's long-term objective to integrate environmentally preferable policies into all City purchases. Decisions relating to the implementation of this policy shall initially be made by the specifying department with the understanding that the purchase of recycled and environmentally preferable products is an affirmative policy of the City.

(b) *Definitions.* The following terms shall have the assigned definitions for all purposes under this policy:

(1) *Compost products* means mulch, soil amendments, ground cover, or other landscaping material derived from the biological or mechanical conversion of cellulose-containing waste materials.

(2) *Environmentally preferable products* means products that have a lesser or reduced effect on human health and the environment when compared with competing products that serve the same purpose. This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, and disposal of the product.

(3) *Post-consumer recycled material* means only those products generated by a business or consumer which have served their intended end uses, and which have been separated or diverted from the solid waste stream for the purposes of collection, recycling and disposition.

(4) *Practicable* means sufficient in performance and available at a reasonable price.

(5) *Price preference* means a percentage by which offered prices for recycled or environmentally preferable products are temporarily reduced solely for purposes of bid evaluation and comparison.



(6) *Recyclable product* means a product which, after its intended end use, can demonstrably be diverted from the City solid waste stream for use as a raw material in the manufacture of another product.

(7) *Recycled material* means material and byproducts that have been recovered or diverted from solid waste and that can be utilized in place of raw or virgin material in manufacturing a product. It is derived from post-consumer recycled material, manufacturing waste, industrial scrap, agricultural waste, and other waste material, but does not include material or byproducts generated from, and commonly reused within, an original manufacturing process.

(8) *Recycled product* means a product containing recycled material.

(9) *Life cycle costing* means the identification and inclusion of all direct and indirect costs associated with a particular product or material. This includes the initial cost of purchase, anticipated maintenance and repair and the direct and indirect disposal costs associated with disposal or removal of the product at the end of its useful life. Wherever practicable, a full cost accounting methodology shall be applied in life cycle costing.

(10) *Full cost accounting* means the identification and inclusion of all direct and indirect costs associated with providing a particular service or program.

(11) *Contractor* means any person, group or group of persons, consultant, association, partnership, corporation or other business entity that has a contract with the City (including suppliers) or serves in a subcontracting capacity with an entity having a contract with the City for the provision of goods or services.

(c) *Policies.*

(1) The Mayor, City Manager and City Council shall strongly support and aggressively implement the Kansas City Environmentally Preferable Procurement Policy.

(2) All department, offices and agencies shall, whenever cost effective and to the extent reasonably practicable, use and require their contractors and consultants to use, environmentally preferable products with the maximum amount of recovered materials.

(3) The Commissioner of Purchases and the Environmental Management Department with the guidance of the Coordinating Committee on Environmentally Preferable Procurement shall maintain minimum content standards for the purchase of certain designated products, such as a minimum post-consumer recycled content or specific limitations on hazardous materials.

(4) The Commissioner of Purchases shall establish a price preference of up to fifteen percent (15%) for recycled and other environmentally preferable products. This price preference shall be established in advance of any bid and may be modified from time to time in the discretion of the Commissioner of Purchases with the objective of maximizing the City's purchase of environmentally preferable products to the extent practicable. Varying price preferences may be established for different products and for the same product from time to time, subject to the maximum fifteen percent (15%) limitation.



(5) All departments, offices and agencies shall make every reasonable effort to ensure that their contractors use recycled paper in printed materials, and that it bears the imprint identifying the recycled content whenever practicable, and that such contractors use both sides of paper sheets whenever practicable.

(6) Departments, offices and agencies may specify recycled content or other environmentally preferable standards higher than the minimum standards established by this policy.

(d) *Coordinating Committee on Environmentally Preferable Procurement.* There is hereby created a Coordinating Committee on Environmentally Preferable Procurement, to serve without compensation. It shall be the duty of the Coordinating Committee on Environmentally Preferable Procurement to meet not fewer than ten times each year for the purpose of developing environmentally preferable procurement practices, coordinating the implementation of this Kansas City Environmentally Preferable Procurement Policy and recommending to the City Council, the Commissioner of Purchases, and the Environmental Management Director the ways and means of improving environmentally preferable procurement by the City, its departments, offices, agencies and contractors. The Committee shall consist of: one member of the City Council; one member of an environmental organization with offices in Kansas City; one representative of a Kansas City business committed to environmentally preferable purchasing practices; and the Directors of four City departments with significant purchasing responsibilities, or their designated representatives; all of whom shall be appointed by, and serve at the pleasure of, the Mayor. In addition the following shall also serve on the Committee:

- (1) The City Manager or a designated assistant who shall serve as chairperson;
- (2) The Commissioner of Purchases or a designated representative;
- (3) The Director of Environmental Management or a designated representative;
- (4) One member of the Environmental Management Commission designated by that Commission;
- (5) The Jackson County Purchaser or a designated representative. The Director of Environmental Management shall be the secretary and shall provide administrative support for the Committee.

(e) *Responsibilities of Environmental Management Department.* The Environmental Management Department shall:

- (1) Serve as a resource to the Commission of Purchases and the Coordinating Committee to provide environmental expertise and to assist the Purchasing Division in the exercise of its responsibilities under this policy.
- (2) Serve on such committees and task forces as may reasonable be requested by the Commission of Purchases or otherwise required to aid in the implementation of this policy.
- (3) Provide a resource to the Commission of Purchases and City departments, offices and agencies to develop and maintain information about environmentally preferable products



and recycled products and to encourage the implementation of this policy throughout City departments.

(4) Develop and maintain information about environmentally preferable products and recycled products containing the maximum practicable amount of recycled materials available for purchase by departments, offices and agencies whenever possible. Initially, these shall include the products designated in paragraph (h) of this Section.

(5) Assist the Commissioner of Purchases, as requested, in gathering information necessary for the submission of an annual report to the City Council as provided in Section (f)(5) hereof.

(6) Publicize the progress of policy implementation.

(f) *Responsibilities of Commissioner of Purchases.* The Commissioner of Purchases shall:

(1) Develop and maintain information about environmentally preferable products and recycled products containing the maximum practicable amount of recycled materials, available for purchase by departments, offices and agencies whenever possible. Initially, these shall include the products designated in paragraph (G) of this Section. The Commissioner of Purchases may modify this list as the Commissioner determines to be appropriate.

(2) Inform departments, offices and agencies to review policy requirements and new procurement opportunities, and to monitor the status of policy implementation product research results.

(3) Disseminate information on recycled and environmentally preferable product procurement opportunities, specifications, and performance to departments, offices and agencies.

(4) Communicate with departments, offices and agencies to review policy requirements and new procurement opportunities, and to monitor the status of policy implementation product research results.

(5) Submit an annual report to the City Council reflecting the implementation status of the procurement program, including:

(i) A compilation of procurement data collected from all departments and other parties charged with implementation responsibility under this policy,

(ii) An account of the current status of product evaluations conducted by departments,

(iii) An assessment of procurement program effectiveness, an evaluation of program goals, and projections of future procurement opportunities, and

(iv) Recommendations for changes in procurement policy.

(6) Provide a readily accessible opportunity for other City departments, offices and agencies to provide input, feedback and recommendations for changes to the Kansas City Environmentally Preferable Procurement Policy and its implementation.



(7) Require that vendors utilized by the Purchasing Division maintain and report to the City the quantity and quality of recycled and environmentally preferable products purchased through the Purchasing Division during each fiscal year.

(g) *Responsibility of all other City departments, offices and agencies.* Each City department, office and agency shall:

(1) Survey existing service and product specifications to determine whether existing requirements require the use of products manufactured from virgin materials or in any manner exclude recycled, refined, remanufactured, reusable or renewable products or materials and to report the results of such survey to the Commissioner of Purchases and Environmental Management Director.

(2) Evaluate each recycled or environmentally preferable product designated by the Commissioner of Purchases to determine the extent to which the product may be practicably used by the department, office or agency and its contractors.

(3) Purchase recycled products with the maximum amount of recycled materials practicable.

(4) Ensure that contracts issued by the department, office or agency require recycled and environmentally preferable products wherever practicable.

(5) Ensure that contracts issued by the department, office or agency for recycled products require the maximum practicable amount of recycled material and that contractors provide certification of this content and report amounts used.

(6) Ensure that all printing by City departments, offices or agencies use recycled paper and bear the chasing arrow logo or other imprint identifying it as such, wherever practicable.

(7) Whenever recycled content products are used, reasonable efforts shall be undertaken to label the products to indicate that they contain recycled material.

(8) Use both sides of paper sheets whenever practicable in printing and copying.

(9) Ensure that requests for bids and proposals issued by the City require that, whenever practicable, contractors use recycled paper and both sides of paper sheets.

(10) As requested by the Commissioner of Purchases, report the progress of policy implementation by the department to the Commissioner of Purchases, including the status of product evaluations conducted by the department and types of environmentally preferable products purchased by the department and its contractors; and specifically address problems, satisfactions and recommendations.

(11) Report total purchases of environmentally preferable, recycled, and non-recycled products by the department and its contractors annually to the Commissioner of Purchases.

(12) Reporting requirements under this policy shall be addressed by the department, office or agency ordering or requesting the product and not the department, office or agency to whom it is shipped or which uses the product to produce an item requested by another department, office or agency.



(h) *Environmentally preferable products.* The Commissioner of Purchases shall periodically designate certain products or product lines as targets for environmentally preferable City purchases. The Environmental Management Director, the Coordinating Committee and all City departments shall cooperate with the Commissioner of Purchases to examine purchases within those targeted lines and explore alternative environmentally preferable products to the fullest extent reasonably practicable. The following product lines are initially designated as areas of focus for environmentally preferable purchases:

- (1) Paper and paper products.
- (2) Compost products.
- (3) Horticultural mulch made with recycled land clearing and other wood debris.
- (4) Construction aggregates made with recycled content concrete, glass or asphalt.
- (5) Cement and asphalt concrete containing glass cullet, recycled fiber or plastic, tire rubber, or fly ash.
- (6) Lubricating oil and hydraulic oil with re-refined oil content.
- (7) Antifreeze.
- (8) Recycled plastic products.
- (9) Remanufactured tires and products made from recycled tire rubber, including rubber mats and play field surfaces.
- (10) Insulation products.
- (11) Paint.
- (12) Remanufactured laser printer toner cartridges.
- (13) Alternative fuels and automotive products
- (14) Cleaning products..
- (15) Other products as designated by the Commissioner of Purchases.

J.1.4 Purchase of University Vehicles

All purchases of University vehicles shall be handled through Procurement Services. Purchase from state contracts, or other existing contracts that offer exceptional value is strongly encouraged. Purchase of used vehicles should be considered. The vehicle type, size and accessories specified must be appropriate for the intended use.

Before any new or replacement vehicle is purchased, a review of both the overall need for the vehicle and a cost-benefit analysis of purchasing a vehicle should be completed. Departments should evaluate the cost per mile to operate the vehicles taking into consideration acquisition costs, expected retail or trade-in value, and operating costs such as fuel, maintenance and other administrative expenses. The Cost/Benefit Analysis of Purchase vs. Rental spreadsheet is available for use in making these calculations.



If anticipated annual mileage of a non-exempt vehicle (See list of exempted vehicles under CAFE Standards) is fewer than 10,000 miles, the administrative head of the department should consider use of fleet vehicles, rental vehicles or encourage employees to use their personal vehicle instead of purchasing a vehicle. Written justification for purchase of a non-exempt vehicle that is expected to be driven fewer than 10,000 miles each year must be approved by the division head and provided to the department fiscal officer. Vehicles used on a daily basis, for example mail delivery vehicles, are exempt from this requirement.

Sport Utility and Four-Wheel Drive Vehicles

In order to justify the purchase or lease of Sport Utility Vehicles (SUVs) and four-wheel drive vehicles, each department seeking to purchase or lease either SUVs or four-wheel drive vehicles must demonstrate in writing, to the satisfaction of the division head that the vehicle is required to perform an essential function. If it is so demonstrated, priority consideration shall be given to the purchase or lease of an alternative fuel or hybrid SUV or four-wheel drive vehicle.

15-Passenger Vans

Due to safety issues, all 15 passenger van acquisitions must be approved by the Director of Risk Management. Consult the Risk and Insurance Management website for Safety Guidelines for use of 15 passenger vans.

Alternative Fuel Vehicles

Seventy percent (70%) of non-exempt fleet vehicle purchases must be Alternative Fuel Vehicles (AFV). **REFERENCE:** RSMo §414.400-414.417 and RSMo §37.455

Bid specifications must include requests for bids for both standard fuel vehicles and alternative fuel vehicles. Based on anticipated usage information provided by the department, Procurement Services shall calculate life cycle costs based on bids for each. When the life cycle costs for the alternative fuel vehicle are less than, or exceed the life cycle costs of a standard fuel vehicle by no more than 10% (17% in Kansas City and St. Louis) the alternative fuel vehicle must be purchased.

Prior to achievement of the percentage of AFV purchases, the requirement to purchase AFVs may be waived by a Vice Chancellor or Vice President in exceptional circumstances when justification is provided in writing. Justification may include:

- The department's vehicles will be operating primarily in an area in which alternative fuel is not reasonably available; or
- The University is unable to acquire or operate vehicles within the life cycle cost limitations cited above.



After a campus has achieved the required percentage of AFV purchases in a biennial period, Procurement Services may waive this requirement, so long as it does not jeopardize the attainment of this goal for the campus.

Alternative Fuel State legislation requires at least 30 percent of all fuel used in alternative fuel vehicles be the designated alternative fuel. **REFERENCE:** RSMo §414.400.2

For more information see the U.S. Department of Energy's Energy Efficiency & Renewable Energy website regarding Alternative Fuels

CAFE Standards

The criteria used to specify and evaluate bids for new vehicles shall consider fuel economy. All non-exempt vehicles must meet Corporation Average Fuel Economy (CAFE) standards set by the EPA. **Exempted Vehicles** Vehicles exempted from this requirement are:

1. primarily used off road, for construction or road maintenance;
2. regularly used in the movement of maintenance or construction equipment;
3. trucks or utility vehicles that are regularly used to transport trailers;
4. vehicles with manufacturer-stated seating capacity exceeding six persons and the department head has certified that the vehicle will be used to transport its rated capacity;
5. vehicles used primarily for criminal law enforcement or motorcycles, all-terrain vehicles, ambulances;
6. vehicles over 8500 lbs; or
7. any type of vehicle for which the EPA has not published fuel economy comparisons.

Replacement of Vehicles

When a vehicle is unsafe, unreliable, uneconomical to operate, or when annual maintenance cost exceeds 30% of the value of the vehicle, consideration should be given to replacing the vehicle. Departments should strive to replace vehicles before operating costs become prohibitive. The suggested replacement cycle for standard passenger vehicles is 100,000 miles or seven years.

All vehicle purchases shall be made using the UM Purchasing Policy guidelines.

J.2 Model Fleet Business Cases

Fleet leasing is a cost-effective option for new technologies, where equipment costs are decreasing during the upward curve of adoption rates. The following business cases are available on www.electrifyheartland.org and on the project DVD.



Lee's Summit R-7 School District

Shows a lifecycle case on a lease-purchase plan in a near performance contracting model, using anticipated savings from a mixed-use loan (resulting in lower interest rates), reduced operational costs, recaptured capital budget, and more. See cost details on slide 21.

Smith Electric Vehicles Newton

Shows a simple business case for a high-mileage delivery duty-cycle, ideal for an urban setting.

Light-duty Fleet Opportunities

Entrepreneurs and fleet leasing companies are making it easier to adopt EVs in fleets by buying in large quantities and leasing equipment to fleets at a discounted rate. Summer 2012, Nissan announced low-cost consumer leases direct from dealerships for the Leaf. Below is a sample sell sheet from Eckhaus Fleet for the Mitsubishi MiEV, deeply discounted for fleet adoptions.



2012 MITSUBISHI COMMERCIAL PURCHASE PROGRAM

2012 i-MiEV SE \$13,651*

-ONLY FROM ECKHAUS FLEET-

Over 13,000 Mitsubishi innovative Electric Vehicles (MiEV) have been sold in the last 3 years in Japan and Europe



Mitsubishi's 80 MPH highway capable 100% electric car

EPA-RATED 126 MPGE IN CITY DRIVING AND 99 MPGE ON THE HIGHWAY

(112 MPGE COMBINED).

- **Eckhaus Fleet cars include both the cold zone and quick charge packages**
- **All orders are subject to acceptance by manufacturer.**

*after \$7,500 federal tax credit, \$6,500 Eckhaus Fleet discount, and \$2,000 CA. rebate
MSRP \$31,975.00/INVOICE \$29,651.00

MSRP pricing is the latest published fleet pricing. All pricing subject to change without notice. All vehicles subject to availability. Pictures may include options not included on fleet vehicles.

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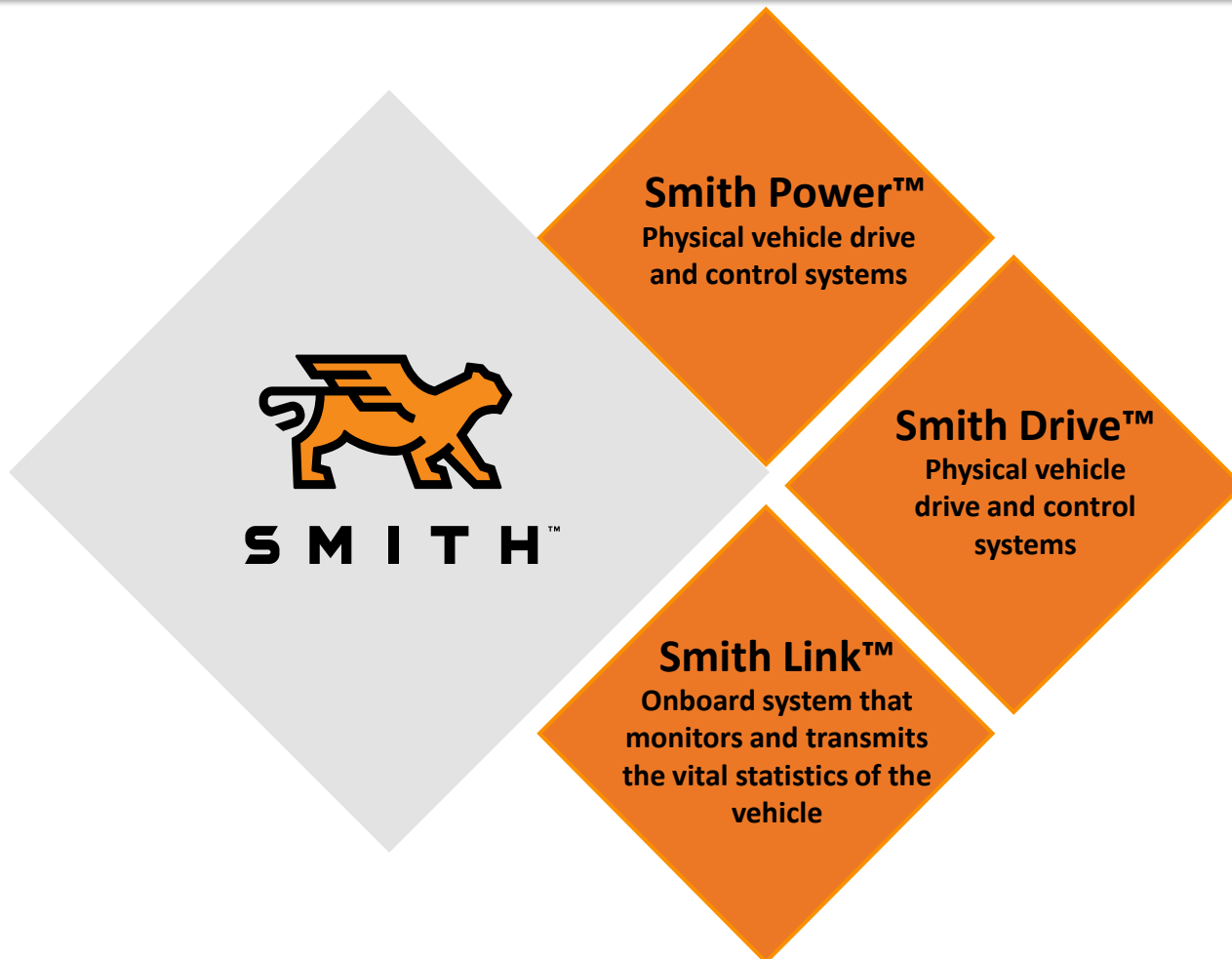
Exhibit J-1. Discounted EV rates by fleet leasing/purchasing company



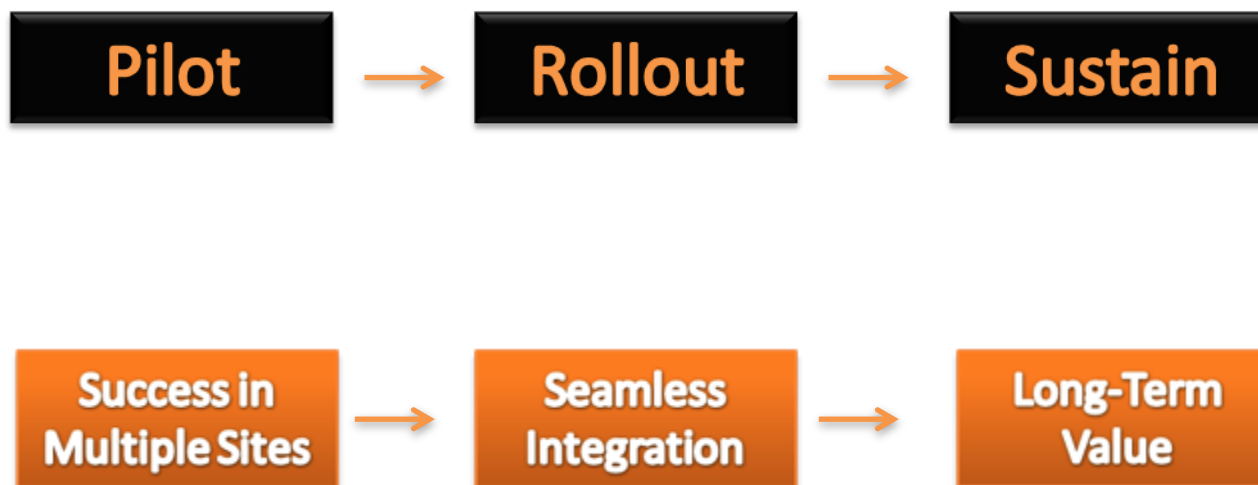
S M I T H TM

SAMPLE NEWTON BUSINESS CASE

NEWTON SERIES 2000 REVIEW



SMITH FULL CIRCLE SUPPORT FOR FLEET ELECTRIFICATION



Incentives Breakdown

DOE

Department of Energy Grant (DOE)

- 24 month program
- \$47,500 per vehicle for data collection
- Discounted at time of invoicing

TRUCK INCENTIVES – VOUCHERS AND REBATES

2012 – 1st/2nd Quarter

- California HVIP
 - \$20,000 Voucher
 - \$10,000,000 available
- Maryland Electric Truck Program
 - \$20,000 Voucher/Rebate
 - \$500,000 available/25 Trucks
- Illinois Rebate Program
 - \$4,000 Rebate

2012 – 3rd/4th Quarter

- California HVIP
 - Up to \$40,000
- New York State ZVIP
 - All Major NY Markets
 - June/July 2012
 - \$20,000-\$40,000
- New York City
 - Private Fleet Program
 - Hunts Point Clean Truck
 - Up to \$40,000
- Upcoming Vouchers
 - Massachusetts
 - Oregon
 - Washington

SAMPLE PRICING BREAKDOWN

10 Vehicle Pilot

Newton Box Truck:

- 154" Wheelbase
- 26,000LB GVW
- Air-condition
- 24V Aux Batteries
- 80kWh

Base Cost Before Options
Equipment \$137,925

- **All-Electric Cold Box included**

	Units	Unit Cost	Total	
26,000 GVW Newton; 154 WB	10	\$ 144,445	\$ 1,444,450	
Cold Car-All Electric Box	10	\$ 46,200	\$ 462,000	
				\$ 1,906,450
DOE Funding, 24 month program	10	\$ (47,500)	\$ (475,000)	
CA HVIP	10	\$ (40,000)	\$ (400,000)	
			Per Unit	\$ 103,145
TOTAL				\$ 1,031,450

ASSUMPTIONS

ROI SUMMARY 10 BOX TRUCKS:

- Based on 10 unit annual savings Electric Vs. Gasoline
- Purchase price cab and chassis with box \$123,145 Electric Vs. \$78,000 Gasoline
- Gasoline \$3.98 gallon
- .22c/per mile maintenance
- 8.5 MPG
- 18,000 annual miles

ROI Summary-BOX

(Cost Justification)

10 Vehicles- Smith Newton Box

- Fuel & Operations Expense saved Year 1 \$82,230
- Gasoline Fuel Eliminated Per/Year 21,176 gallons
- Breakeven @ Year 3 Vs. Gasoline

ROI Summary 10 Trucks	Savings
Year 5	\$219,460
Year 7	\$469,260
Year 10	\$843,810

LEE'S SUMMIT R-7 SCHOOL DISTRICT

"We prepare each student for success in life"

“LEASE-PURCHASE” INITIATIVES

(TRANSPORTATION, TECHNOLOGY, PROPERTY)

To provide a “Lease-Purchase” plan to:
Upgrade the R-7 district transportation fleet,
expand technology infrastructure, equipment, and
programs, improve facilities, and procure property.
The initiative is funded by district savings and
capital along with state, federal, public, and
corporate alternative resources.

LEE'S SUMMIT R-7 SCHOOL DISTRICT

"We prepare each student for success in life"

SCHOOL DISTRICT PROFILE

The Lee's Summit R-7 School District is a suburban public school system located south east of Kansas City, Missouri. It is an award winning school district for academics, activities, and facilities, encompasses 117 square miles, and is made up of five municipalities.

The City of Lee's Summit population is nearly 100,000,000 and the Pre K - 12 student enrollment is approaching 18,000 students. The past eleven year average annual enrollment growth has been 305 students.

For the past twelve years the district has won the "Missouri Distinction in Performance Award" with a perfect score on all fourteen criteria!

LEE'S SUMMIT R-7 SCHOOL DISTRICT

"Lease Purchase Initiatives"

"LEASE PURCHASE" PARTNERS -

(**TRANSPORTATION**, **TECHNOLOGY**, **PROPERTY**)

OPERATION SERVICES:

Dr. Tom Kurucz, Deputy Superintendent

Ron Cox, Director Purchasing & Distribution / Project Coordinator

TRANSPORTATION:

- Linda Thompson, Director Transportation Services
- Jesse Schroyer, Smith Electric Vehicles
- Brian Watley, Trans Tech Bus Company
- Scott Kindaid, Midwest Bus Company

TECHNOLOGY:

- Dr. Amy Gates, Executive Director Technology Services
- Janet Herdman, AOS: Greater Kansas City Consortium

PROPERTY:

- Mark Long, Zimmer Companies, Inc. Real Estate

FINANCING:

- Dick Bartow, George K. Baum Investment Banker

LEE'S SUMMIT R-7 SCHOOL DISTRICT

"We prepare each student for success in life"

"ALTERNATIVE FUEL INITIATIVES"

(VEHICLE "LEASE PURCHASE" OPTION)

To provide a reliable, operationally diverse bus - vehicle fleet that is effective for students, staff, and annually saves fuel cost, positively impacts the environment, reduces reliance on "foreign" oil products and is funded by district savings, budgeted capital funds, state, federal, public, corporate, and/or private resources.

The R-7 buses travel over 2,000,000 miles per year and approximately 12,800 miles daily.



LEE'S SUMMIT R-7 SCHOOL DISTRICT
“Alternative Fuel Initiatives”

ALTERNATIVE FUEL MASTER PLAN

(SCHOOL BUS, TRUCK, VEHICLE UPGRADE)



- **PHASE I - Purchasing & Distribution trucks all electric power conversion 2009 - 2010: Completed**
- **PHASE II - Distribution Refrigerator truck: Converted to All Electric 2013 - 2014: Pending**
- **PHASE III - School bus, truck, vehicle multi-fuel options: Compressed Natural Gas (CNG), Electric, Selective Catalytic Reduction (SCR) Diesel conversion 2013 - 2014: Pending**

LEE'S SUMMIT R-7 SCHOOL DISTRICT
“Alternative Fuel Initiatives”

PURCHASING & DISTRIBUTION -

(PHASE I & II ELECTRIC AND CNG TRUCKS)

PHASE I (Completed)

- FY 2009 -2010 lease purchase 4 all electric trucks \$849,664
- Kansas City Coalition Clean Cities ARRA grant \$424,911
- District capital budget deferred savings \$424,753

Annual Operations Fuel Savings \$15,000
(Diesel \$0.40 per mile/Electric \$0.12)



PHASE II (Pending)

- FY 2013 - 2014 convert P&D refrigerator truck to **All electric truck**

LEE'S SUMMIT R-7 SCHOOL DISTRICT
“Alternative Fuel Initiatives”

TRANSPORTATION FLEET -

(PHASE II & III RATIONALE)

- Offset the rising cost of equipment and district aging bus fleet
- Provide long-term fuel, rental, and maintenance cost savings
- Utilize outside resources to lower taxpayer expenditures
- Reduce the negative impact of cost containment budget cuts
- Educate future generations of students on “Green Initiative” programs
- Create cleaner air/sound quality in R-7 schools and communities
- Reduce district and national reliance on “foreign” oil products



LEE'SUMMIT R-7 SCHOOL DISTRICT
"Alternative Fuel Initiatives"

TRANSPORTATION FLEET -

(PHASE II & III BUSES, TRUCKS, OTHER VEHICLES)

ALTERNATIVE FUEL BUS, TRUCK, OTHER TEN-YEAR "LEASE PURCHASE" EXPENSE:

20 Compressed Natural Gas [CNG] (Type A 30 passenger small bus) @ \$90,000	\$1,800,000
80 Compressed Natural Gas [CNG] (Type D Transit 72 passenger bus) @ \$139,650	\$11,172,000
6 Electric (Type A/D 30 to 50 passenger bus) @ \$204,250	\$1,225,500
1 Refrigerator Truck [CNG or Electric] (Purchasing & Distribution) @	\$50,000
34 Diesel buses (Type C/D 72 passenger bus bought in 2009 - 2012)	<u>retained</u>
9 Diesel buses (Type A 30 passenger bus bought in 2009 - 2012)	<u>retained</u>
150 TOTAL UNITS (\$14,247,500 @ 95% pre-bid estimate)	
Infrastructure (CNG \$700,000, Electric \$100,000, Other \$200,000)	\$1,000,000
Lease Purchase Interest (Ten-Year financing on \$15.2M)	<u>\$1,918,460</u>
	\$17,165,960

OPERATION CAPITAL, ALTERNATE RESOURCES, DEFERRED SAVINGS REVENUE:

Operation - Capital (Annual budget allocation vehicle replacement, fuel, Other)	\$7,500,000
Trade - in / GovDeals (Sales or trade-in of aging fleet vehicles)	\$750,000
State/Federal/Public/Corporate/Private funds (Energy, fuel, Other)	\$2,712,717
Fuel / Maintenance savings (Ten-year cumulative savings)	\$7,495,634
Future "No Tax" Increase Bond Capital (FY 2018 FY 2020)	\$1,500,000
Bus Rental annual savings (Contracted Services)	<u>\$188,923</u>
	\$20,147,274

VARIANCE:

Available alternate resource options (Technology, Property, Facility PC VIII)	\$2,981,314
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LEE'S SUMMIT R-7 SCHOOL DISTRICT

“Alternative Fuel Initiatives”

“LEASE PURCHASE”

TEN-YEAR REVENUE/EXPENSE SUMMARY

TRANSPORTATION

2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	TOTAL	
\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 7,500,000	
\$ 562,500	\$ 187,500									\$ 750,000	
\$ 2,034,538	\$ 678,179									\$ 2,712,717	
\$ 229,548	\$ 515,216	\$ 696,318	\$ 734,951	\$ 757,460	\$ 770,781	\$ 784,687	\$ 798,675	\$ 810,986	\$ 821,106	\$ 6,919,727	
\$ 223,625	\$ 132,021	\$ 24,870	\$ 25,586	\$ 26,324	\$ 27,084	\$ 27,866	\$ 28,672	\$ 29,502	\$ 30,357	\$ 575,907	
\$ 16,480	\$ 16,974	\$ 17,483	\$ 18,008	\$ 18,548	\$ 19,105	\$ 19,678	\$ 20,268	\$ 20,876	\$ 21,503	\$ 188,923	
				\$ 500,000		\$ 1,000,000				\$ 1,500,000	
\$ 3,816,691	\$ 2,279,891	\$1,488,671	\$ 1,528,545	\$ 2,052,332	\$ 1,566,970	\$ 2,582,231	\$ 1,597,615	\$ 1,611,364	\$1,622,966	\$ 20,147,274	
										\$ -	
\$ 14,247,500										\$ 14,247,500	
\$ 1,000,000										\$ 1,000,000	
\$ 230,083	\$ 313,924	\$ 284,324	\$ 254,224	\$ 223,524	\$ 192,124	\$ 160,124	\$ 125,894	\$ 88,432	\$ 45,807	\$ 1,918,460	
\$ 15,477,583	\$ 313,924	\$ 284,324	\$ 254,224	\$ 223,524	\$ 192,124	\$ 160,124	\$ 125,894	\$ 88,432	\$ 45,807	\$ 17,165,960	
										\$ 2,981,314	

LEE'S SUMMIT R-7 SCHOOL DISTRICT

"We prepare each student for success in life"

"TECHNOLOGY INITIATIVES"

("LEASE PURCHASE" OPTION)

To optimize the use of current district wide technology and provide students access to increased technological resources that support the instructional goals of the R-7 district Comprehensive School Improvement Plan.



LEE'S SUMMIT R-7 SCHOOL DISTRICT
"Technology Initiatives"

TECHNOLOGY MASTER PLAN -

(INFRASTRUCTURE, REPLACEMENT CYCLE, INTERVENTIONS, SOFTWARE, NEW & EMERGING OPTIONS, AND PROFESSIONAL DEVELOPMENT)

- INFRASTRUCTURE: Provide a network that is robust, reliable, secure, and supports emerging technologies
- REPLACEMENT CYCLE: Ensure the district's computer hardware remains consistent with current technology through the replacement, as needed, of student and staff computers and equipment on a clearly defined timeline
- NEW & EMERGING TECHNOLOGY: Provide each student with increased access to relevant technology services that support the instructional goals of the district



LEE'S SUMMIT R-7 SCHOOL DISTRICT
"Technology Initiatives"

TECHNOLOGY MASTER PLAN - (Continued.....)

- INSTRUCTIONAL SOFTWARE & RESOURCES: Provide appropriately aligned resources to support the teaching of the established curriculum
- INTERVENTIONS: Provide research-based technology resources to support the re-teaching of curriculum not mastered and extend the curriculum for students who have achieved mastery of the established curriculum
- PROFESSIONAL DEVELOPMENT (PD): Develop a PD plan to build staff and student capacity for the seamless integration district wide of technological resources



LEE'S SUMMIT R-7 SCHOOL DISTRICT
"Technology Initiatives"

TECHNOLOGY MASTER PLAN - (INFRASTRUCTURE / EQUIPMENT RATIONALE)

- Offset the rising cost of Technology and aging equipment
- Provide long-term planning for annual equipment replacement cycle, software upgrades and growing infrastructure needs
- Eliminate negative impact of cost containment by adding lease resources with interest cost offset by re-allocation and savings
- Make available technology resources that meet the instructional goals of the district
- Optimize the use and support of district technology for the students, staff, and community



TECHNOLOGY MASTER PLAN -

(UPGRADE PLAN)

TECHNOLOGY CAPITAL TEN-YEAR "LEASE PURCHASE" EXPENSE:

INFRASTRUCTURE (Capital expenditures in this area cost FY2013 - 2014)		\$500,000
REPLACEMENT CYCLE (Capital replacement, type/model cost FY2014 – FY2019)		\$5,050,000
OTHER: (TO BE DETERMINED IN TECHNOLOGY LONG-RANGE PLAN)		<u>\$000,000</u>
INTERVENTIONS	\$000,000	\$5,550,000
SOFTWARE	\$000,000	
NEW & EMERGING OPTIONS	\$000,000	
PROFESSIONAL DEVELOPMENT	\$000,000	
LEASE PURCHASE INTEREST (Ten-Year financing \$5.5M)		<u>\$301,500</u>
		\$5,851,500

OPERATION CAPITAL, ALTERNATE RESOURCES, DEFERRED SAVINGS REVENUE:

Operation - Capital resource (Lease option Capital resource allocation \$5,550,000)	\$5,550,000
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VARIANCE:

Available alternate resources (Technology option deficit estimate)	(\$301,500)
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TEN-YEAR REVENUE/EXPENSE SUMMARY

TECHNOLOGY

CUMULATIVE SAVINGS	\$ (301,500)
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LEE'S SUMMIT R-7 SCHOOL DISTRICT

"We prepare each student for success in life"

"PROPERTY PROCUREMENT" INITIATIVE

("LEASE PURCHASE" SITE OPTION)

To provide a site purchase option for 1.5 Acres and a metal Butler type building, 9,500 SQ', located at 505 SE Transport in Lee's Summit, MO adjacent south of the entry to the current district Transportation Services and Facility Services sites.

LEE'S SUMMIT R-7 SCHOOL DISTRICT
"Property Initiative"

PROPERTY PROCUREMENT - (SITE SELECTION RATIONALE)

- Offset the rising cost of rental storage and new parking spaces
- Provide a solution for eliminating Purchasing & Distribution Services off-site storage annual warehouse rental expense
- Provide a solution for expanding additional planned Transportation driver vehicle and school bus parking
- Provide a solution to Facilities Services storage and vehicle parking space overcrowding
- The property would be available in summer 2013, through Zimmer Real Estate, INC. of Kansas City, MO

LEE'S SUMMIT R-7 SCHOOL DISTRICT
"Property Initiative"

PROPERTY PROCUREMENT - SITE PLAN



PROPERTY PROCUREMENT -

(SITE PURCHASE PLAN)

PROPERTY CAPITAL TEN-YEAR “LEASE PURCHASE” EXPENSE:

PROPERTY BUILDING NEGOTIATED COST (Listed at \$625,000)	\$575,000
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LEASE INTEREST ESTIMATE (Ten-Year financing on \$575K)	<u>\$70,184</u>
	\$645,184

TRANSPORTATION / PURCHASING & DISTRIBUTION DEFERRED SAVINGS REVENUE:

Operation - budgeted P&D Capital (Ten-year deferred off-site rental annual savings)	\$350,000
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Operation - budgeted Transportation Capital (Parking lot added spaces FY15)	\$75,000
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Operation - budgeted Capital PROP C (Site improvements)	<u>\$150,000</u>
	\$575,000

VARIANCE:

Available alternate resources (Property procurement deficit estimate)	(\$70,184)
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LEE'S SUMMIT R-7 SCHOOL DISTRICT
 "Property Initiative"
 "LEASE PURCHASE"
 TEN-YEAR REVENUE/EXPENSE SUMMARY
 PROPERTY

[illegible]

LEE'S SUMMIT R-7 SCHOOL DISTRICT

“TRANSPORTATION, TECHNOLOGY, PROPERTY Initiatives”

“LEASE PURCHASE” TEN-YEAR REVENUE/EXPENSE

	FY 2013-14	FY2014-15	FY2015-16	FY2016-17	FY2017-18	FY2018-19	FY2019-20	FY2020-21	FY2021-22	FY2022-23	Total
OPERATION CAPITAL TRANS.	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 7,500,000
TRADE-IN/GOV. DEALS	\$ 562,500	\$ 187,500									\$ 750,000
NON-DISTRICT FUNDS	\$ 2,034,538	\$ 678,179									\$ 2,712,717
FUEL SAVINGS	\$ 229,548	\$ 515,216	\$ 696,318	\$ 734,951	\$ 757,460	\$ 770,781	\$ 784,687	\$ 798,675	\$ 810,986	\$ 821,105	\$ 6,919,727
MAINTENANCE SAVINGS	\$ 223,625	\$ 132,021	\$ 24,870	\$ 25,586	\$ 26,324	\$ 27,084	\$ 27,866	\$ 28,672	\$ 29,502	\$ 30,357	\$ 575,907
BUS RENTAL SAVINGS	\$ 16,480	\$ 16,974	\$ 17,483	\$ 18,008	\$ 18,548	\$ 19,105	\$ 19,678	\$ 20,268	\$ 20,876	\$ 21,503	\$ 188,923
"No Tax" INCREASE BONDS					\$ 500,000		\$ 1,000,000				\$ 1,500,000
CAPITAL LEASE TECH.	\$ 5,550,000										\$ 5,550,000
CAPITAL LEASE PROP. C	\$ 150,000										\$ 150,000
P&D DEFERRED SAVINGS	\$ 35,000	\$ 35,000	\$ 35,000	\$ 35,000	\$ 35,000	\$ 35,000	\$ 35,000	\$ 35,000	\$ 35,000	\$ 35,000	\$ 350,000
TRANS DEFERRED SAVINGS		\$ 75,000									\$ 75,000
REDIRECTED PC LEASE PAY								\$ 145,342	\$ 338,487	\$ 338,487	\$ 822,316
TOTAL RESOURCES	\$ 3,816,691	\$ 2,279,890	\$1,488,671	\$ 1,528,545	\$2,052,332	\$1,566,970	\$ 2,582,231	\$ 1,597,615	\$1,611,364	\$1,622,965	\$ 27,094,590
BUS/VEHICLE PURCHASE	\$ 14,247,500										\$ 14,247,500
REFUELING INFRASTRUCTURE	\$ 1,000,000										\$ 1,000,000
LEASE INTEREST (on \$15.7M)	\$ 230,083	\$ 313,924	\$ 284,324	\$ 254,224	\$ 223,524	\$ 192,124	\$ 160,124	\$ 125,894	\$ 88,432	\$ 45,807	\$ 1,918,460
TECH. INFRASTRUCTURE	\$ 300,000	\$ 200,000									\$ 500,000
TECH. REPLACEMENT CYCLE	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$1,000,000	\$1,050,000					\$ 5,050,000
LEASE INTEREST (on \$5.5M)	\$ 74,000	\$ 90,000	\$ 68,000	\$ 46,000	\$ 23,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 301,500
PROPERTY TRANS/FACS/P&D	\$ 575,000										\$ 575,000
LEASE INTEREST (on \$575K)	\$ 8,411	\$ 11,517	\$ 10,417	\$ 9,317	\$ 8,217	\$ 7,017	\$ 5,817	\$ 4,557	\$ 3,207	\$ 1,707	\$ 70,184
TOTAL EXPENSE	\$ 17,184,994	\$ 1,365,441	\$1,112,741	\$ 1,059,541	\$1,255,241	\$1,249,141	\$ 165,941	\$ 130,451	\$ 91,639	\$ 47,514	\$ 23,662,644
CUMULATIVE SAVINGS											\$ 3,431,946
SAVINGS TO FY17 FOR FACILITY SERVICES PERFORMANCE CONTRACT PHASE VIII					\$3,431,946						\$ 3,431,946

LEE'S SUMMIT R-7 SCHOOL DISTRICT
“Lease Purchase Initiatives”

**“LEASE PURCHASE”
PARTNER EXPANSION OPTION-
(TRANSPORTATION, TECHNOLOGY, PROPERTY)**

**TRANSPORTATION PARTNER
CLEAN ENERGY COMPANY**

Scott Vazzana,
Business Development Manager

Inclusion of the Clean Energy Company as a partner in the Lee's Summit R-7 School District “Lease Purchase Initiatives” plan for support and development of Compressed Natural Gas [CNG] powered vehicles, associated filling station infrastructure, and the nation wide reduction of reliance on “foreign” oil products.