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Sustainability

City of Prospect

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Team Prospect



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Our Tasks

How can Prospect significantly increase the number of residents who recycle?

Will it be cost-effective for the city to own its streetlights?

What are the trade-offs of moving Prospect's fleet operation to electric vehicles?

Interviews

“If it's a good practice can you really tell someone about it too much?”
–City Resident

“We see it as a big ship. If you start to steer it in the right direction, it’s going to take a long time to get there.” –Boulder, CO. Gov. Employee

“Education is crucial when it comes to expanding recycling programs and making sure that people are putting the right materials in their recycling container” –Rumpke Official

“Maybe we show the kids what they are trying to protect... Let's show them what this good life can be”. –City Resident

RECYCLING



Recycling Enhancement

Current scenario:

45% of Prospect residents regularly recycle. However, Mayor Farnsley's target rate is **60%** eventually, with an aim of **50%** in the near future. Barriers to recycling include misinformation, confusion about what is recyclable, and convenience.



45%
CURRENT
RECYCLING RATE

50%
SHORT-TERM
TARGET
RECYCLING RATE

60%
EVENTUAL
TARGET
RECYCLING RATE

3 Key Development Areas



Education

- Rumpke recycling facility tours
- Invite recycling speakers
- Post creative signs around town to encourage recycling



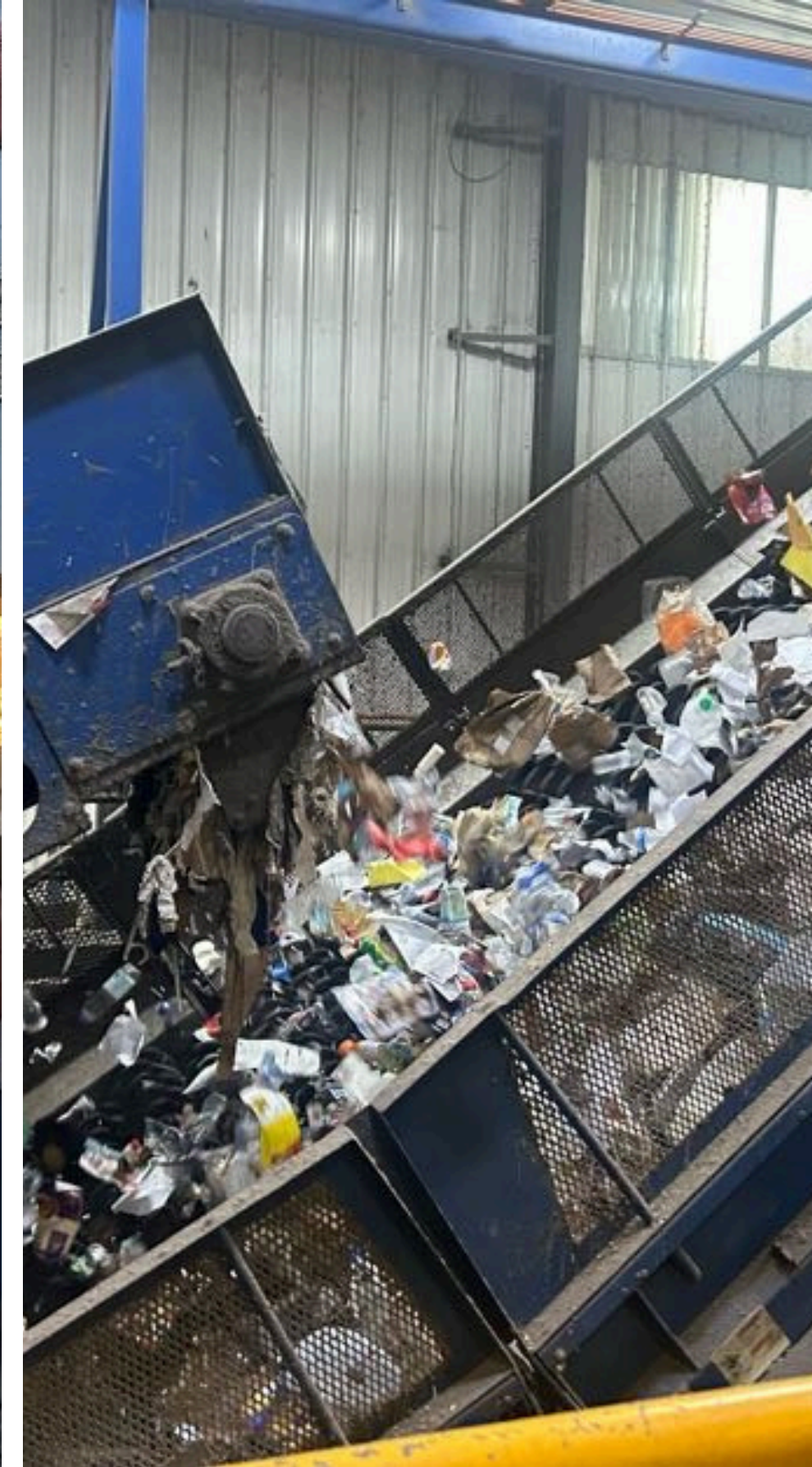
Resources

- Grants from the state of Kentucky (e.g., Recycling Grant, Household Hazardous Waste Grant)
- Recycling campaign
- Online recycling tools (e.g., Waste Wizard)



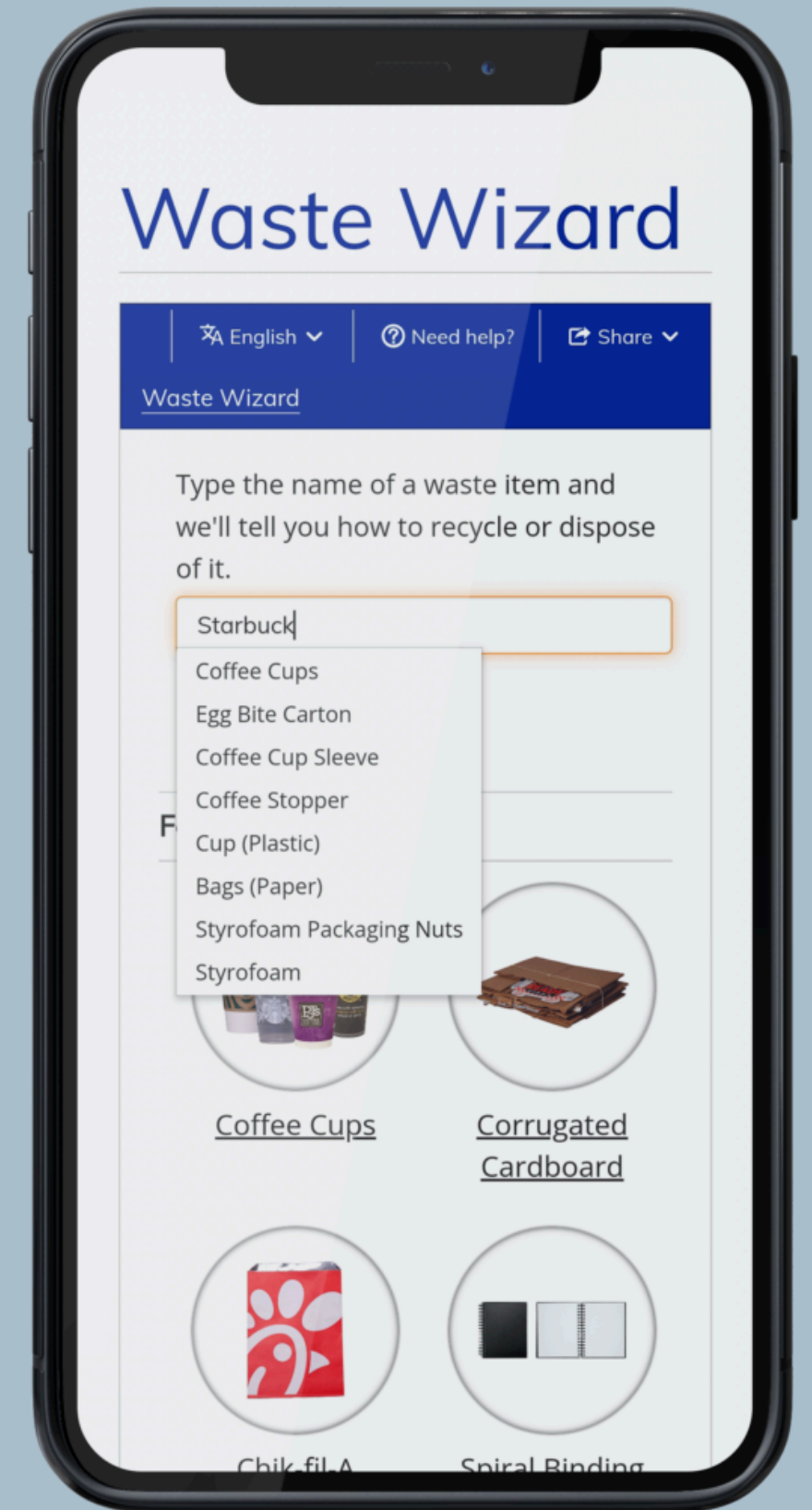
Outreach

- Community Conversation events
- OopsTag program
- Informational mailers



Education

Downloaded from <http://ajph.org/> on November 10, 2015



Outreach

KNOW WHAT TO RECYCLE



USE THE QR CODE TO SIGN UP FOR
RECYCLING PICK-UP REMINDERS
THROUGH CITY MAIL



RUMPK
1-800-828-8171
www.rumpke.com

PLEASE RECYCLE THE FOLLOWING:

GLASS BOTTLES & JARS 	PAPER
PLASTIC BOTTLES 	UNACCEPTABLE items for recycling include: plastic bags, metal hangers, batteries, and medical sharps.
METAL CANS 	CARTONS

FOCUS ON THE SHAPE OF THE CONTAINER

FOR GLASS ASK YOURSELF...

- IS IT A BOTTLE?
- IS IT A JAR?

FOR ALUMINUM ASK YOURSELF...

- IS IT A CAN?

FOR PLASTIC ASK YOURSELF...

- IS IT A BOTTLE?
- IS IT A TUB?
- IS IT A CUP?
- IS IT A JUG?

FOR CARDBOARD ASK YOURSELF...

- IS IT CLEAN OF GREASE OR FOOD SCRAPS?

IF THE ANSWER IS YES...
RECYCLE IT!

OTHER REMINDERS

- RULE OF THUMB: IF IT IS THE SIZE OF A POST-IT OR SMALLER... DON'T RECYCLE IT
- DON'T RECYCLE PLASTIC BAGS (ASK YOURSELF THE QUESTIONS ABOVE FOR PLASTIC)
- YOUR RECYCLABLE IS GOOD AS LONG AS IT IS CLEAN ENOUGH. A LITTLE RINSE WITH WARM WATER IS SUFFICIENT.
- DON'T BAG YOUR RECYCLABLES

ARGHH YOU READY FOR RECYCLING

COME CHAT ABOUT
RECYCLING W/ A
CAPTAIN'S QUARTERS
LUNCH BUFFET

**12:00-
2:00 PM**

**Sat., July
12th**

Captain's Quarters, Riverview Terrace

BROUGHT TO YOU BY THE
MAYOR'S OFFICE &
MOREHEAD-CAIN INTERNS



RSVP WITH THIS
QR CODE!



Community Conversation

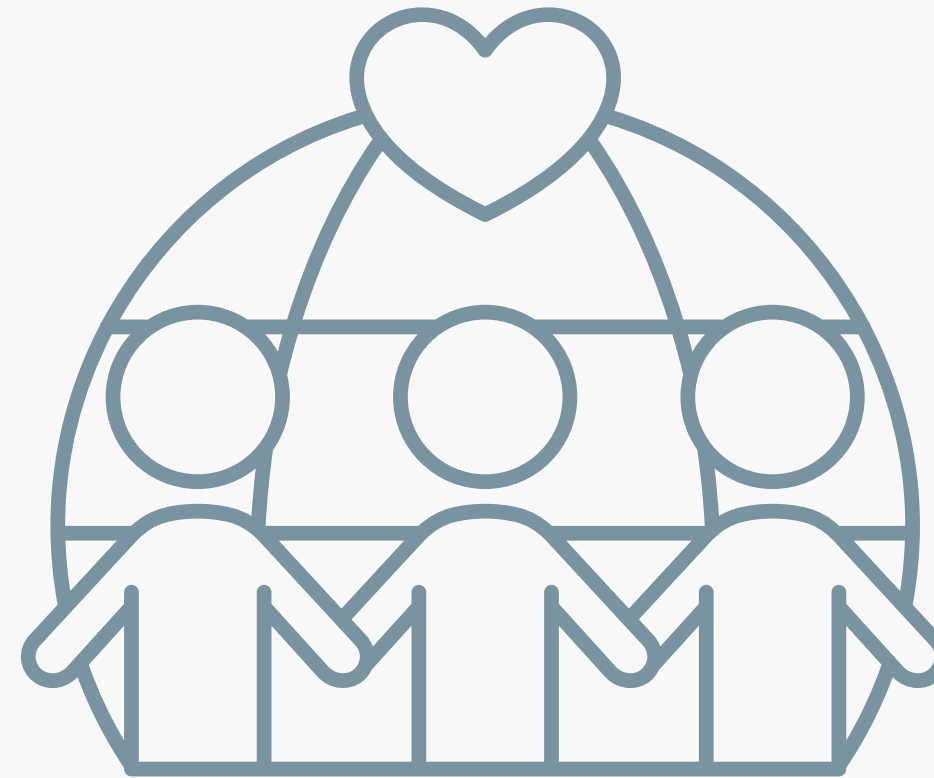


Purpose

To foster a community and culture in Prospect dedicated to sustainability.

Planning

Using the Community Conversations Toolkit, have consistent and intentionally planned events to form a lasting group.

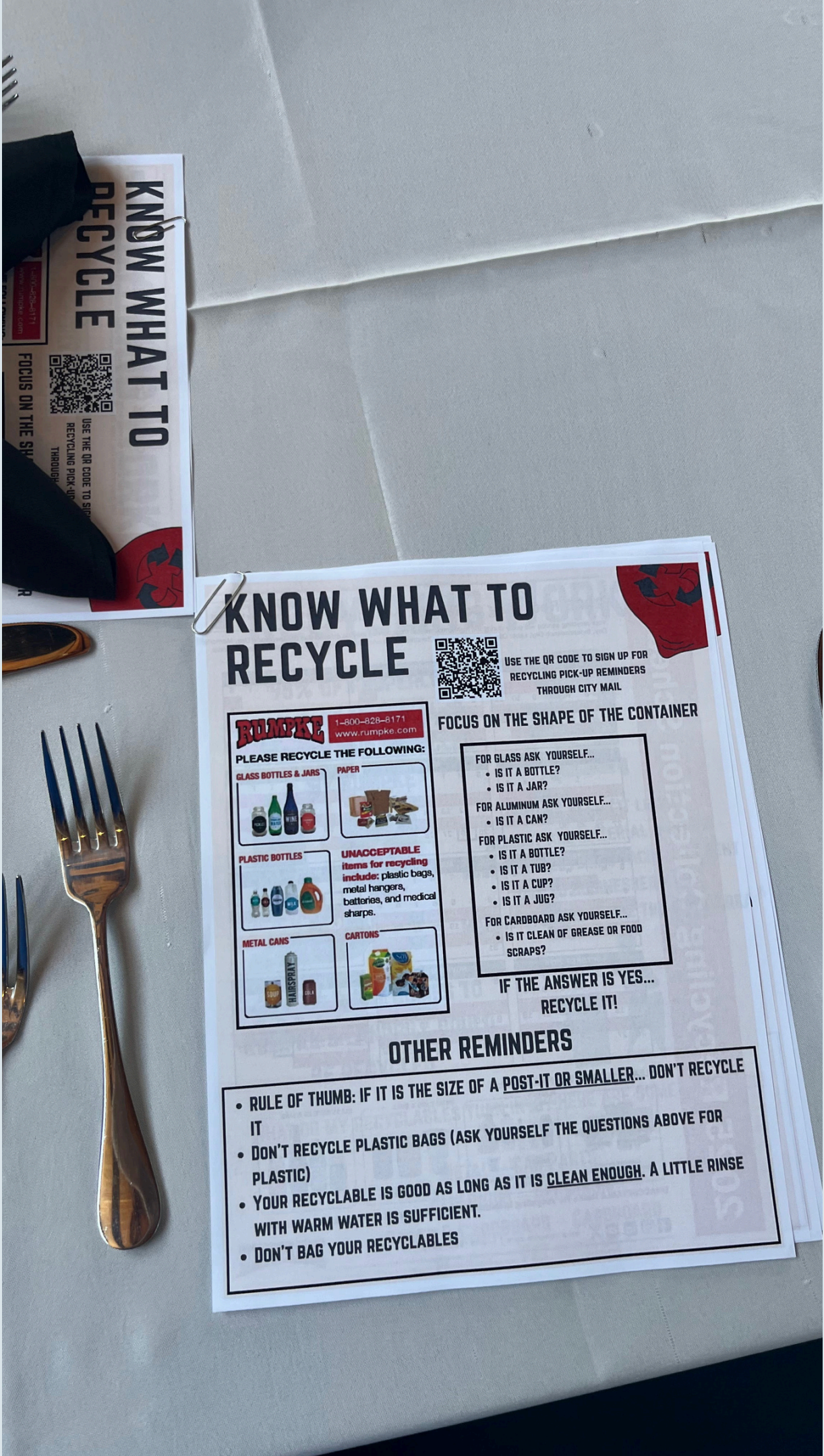


Future

We intend these conversations to develop into a Sustainability Committee working with city government and groups of volunteers for future events.

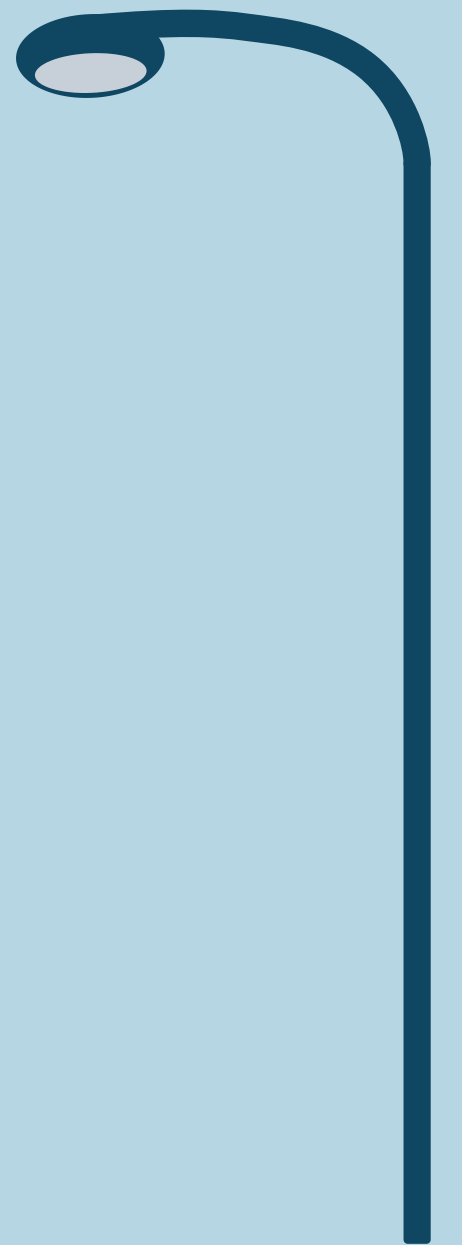


First
Community
Conversation,
7/12/25





SOLAR STREET LIGHTS



GUIDING QUESTIONS

Should the city of Prospect buy out all streetlights from the provider, LG&E, or remain under contract and encourage LG&E to switch to LED/solar lights?

How cost-effective, in general, are LED and solar streetlights as opposed to typical halogen and high pressure sodium (HPS) streetlights?

What are the positive and negative implications of switching to LED/solar streetlighting, and what are potential mitigation options?

Given the geographic location and weather patterns in Prospect, KY, would solar streetlights be a feasible and sustainable option in the long-term?

What is the best financing option for this project?

A Look at Other Communities



Boulder, CO

Population: 105,898

Utility: *Xcel Energy*

Contact: *Lex Telischak*



Decorah, IA

Population: 7,578

Utility: *Alliant Energy*

Contact: *Jim Martin-Schramm*



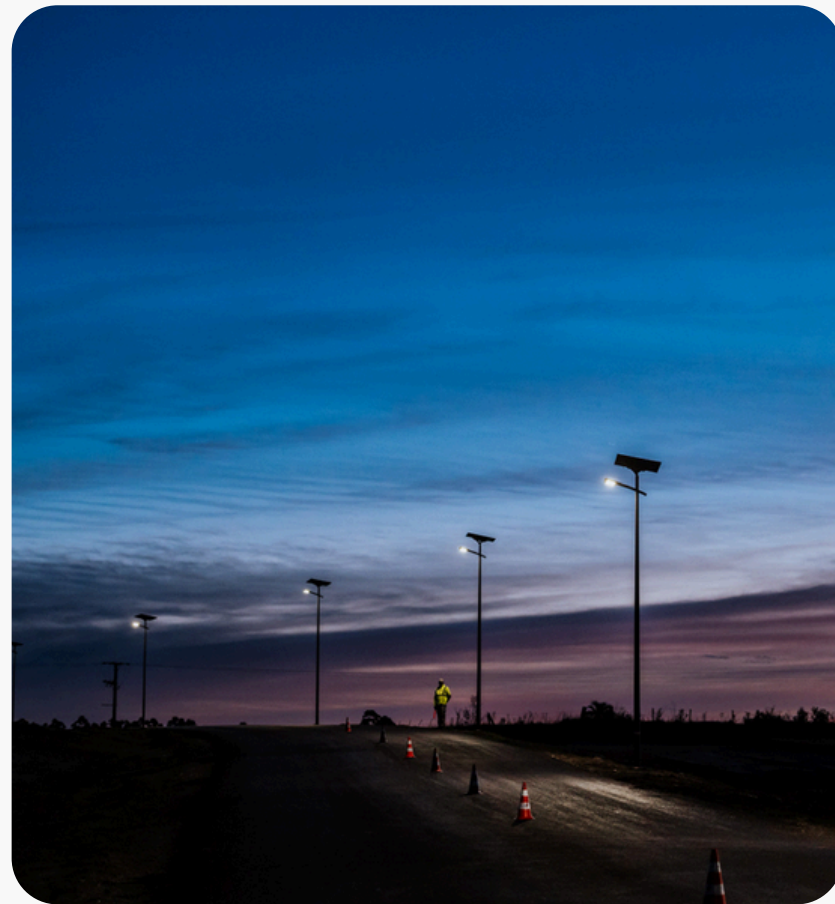
Beachwood, OH

Population: 13,734

Utility: *FirstEnergy*

Contact: *Ben Lombardi*

Recommendations



Via [Fonroche Lighting](#).

97%
OPERATIONS
AND
MAINTENANCE
SAVINGS

LG&E Overcharging the City of Prospect by:
186% to 6718% above actual
electricity costs.

Municipalization of Streetlights

- Prospect would take over operational and ownership control of the city's streetlights.
- Prospect could cut their \$450k+ annual cost by up to 80%

Creating Leverage with Utility Companies

- Identify unmetered fixtures or excessive maintenance fees
- Work with Kentucky Public Service Commission

Solar Streetlight Pilot Program

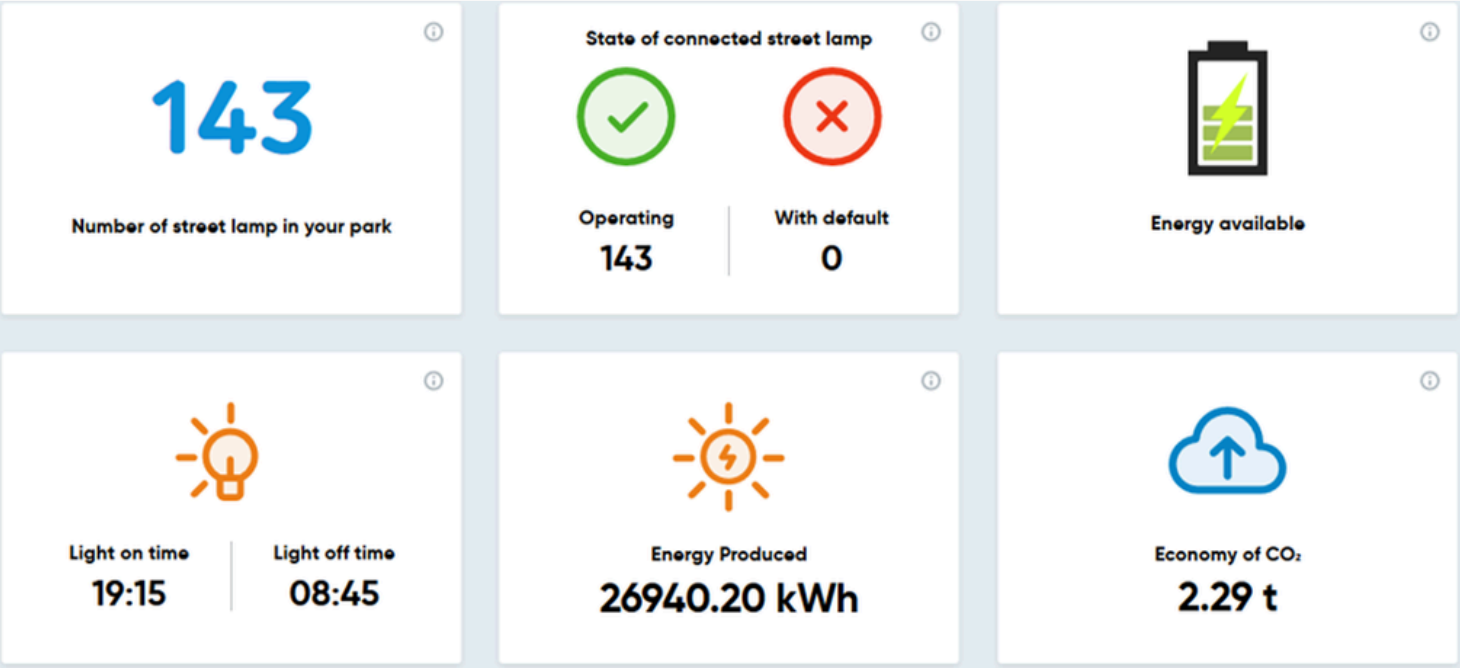
- Pilot streetlights in locations where it would not be critical if a technical problem occurred (e.g. City Hall parking lot, Harrods Creek Park, Little Hunting Creek Park)

Street Lighting Pilot Program

Boulder, CO - GIS



Louisville, KY - GIS



FINANCIAL MODELS

A. Current lighting system - ongoing cost for operations and maintenance							
	Lamp type 1		Lamp type 2		Lamp type 3		Lamp type 4
Lamp type (enter description)	Coach Acorn 9500		LED Acorn		HPS Acorn 9500		Cobra Heads
Number of lamps/fixtures	318		29		9		10
Monthly tariff charge per fixture - rate	\$21.56		\$7.30		\$27.08		\$16.08
Monthly tariff charge per fixture - rate			\$15.72				
Monthly tariff charge per fixture - rate							
Total monthly utility cost per fixture	\$21.56		\$23.02		\$27.08		\$16.08
Total annual cost for lamp type	\$82,273		\$8,011		\$2,925		\$1,930
Total current cost (\$/year)	\$95,138						

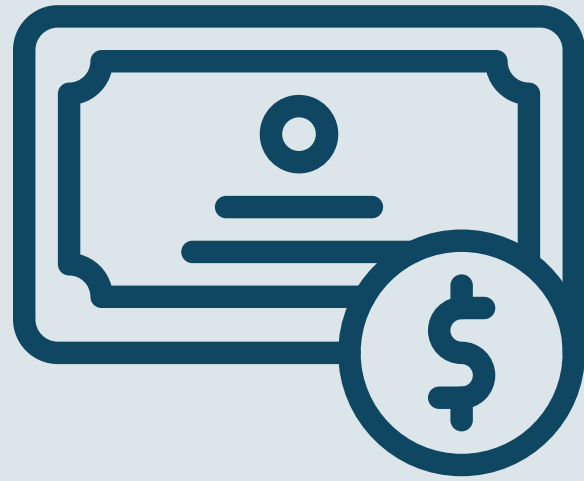
B. Proposed lighting system - ongoing cost for operations and maintenance				
	Lamp type 1		Lamp type 2	
Lamp type (enter description)	LED Acorn		Cobra Heads	
Number of lamps/fixtures	356		10	
Monthly tariff charge per fixture - rate component #1	\$0.39		\$10.01	
Monthly tariff charge per fixture - rate component #2				
Monthly tariff charge per fixture - rate component #3				
Total monthly tariff	\$0.39		\$10.01	
Total utility annual cost for lamp type	\$1,666		\$1,201	
Total projected per-fixture cost (\$/year)	\$2,867			
Other projected non-utility costs (\$/year)				
Total projected cost (\$/year)	\$2,867			

D. Municipal system acquisition costs paid to non-utilities					
	Lamp type 1		Lamp type 2		Total
Lamp type (enter description)	LED Acorn		Cobra Head		
Number of fixtures to acquire	365		10		
Equipment acquisition	\$800	per fixture	\$600.00	per fixture	\$298,000
Equipment installation	\$500	per fixture	450	per fixture	\$187,000
Disposal costs		per fixture		per fixture	\$0
Other costs		per fixture		per fixture	\$0
Total up front non-utility cost	\$485,000				

Inflation/cost escalation	
Current system	8.30%
Proposed system	3.00%
Time-limited charges, proposed system	
Chosen discount rate (nominal dollars)	4.00%

I. Summary project financial metrics	
Net present value at chosen discount rate	\$1,326,485
Internal rate of return	25.30%

Financing Options



Bonds

- Municipal Bonds
- Green Bonds
- Louisville Green Bank



Grants/Local Incentives

- Kentucky Energy Office
- Solarize Louisville Discount Program
- EPAD



Contracts/Agreements

- Tax-Exempt Leasing Purchases
- Energy Performance Contracts

ELECTRIC FLEET VEHICLES





Fleet Electrification

Police Fleet Conversion

Prospect has the chance to partially electrify the police fleet the next time a new non-patrol vehicle is needed. Prospect officers are open to the possibility.

Charging Station Infrastructure

If Prospect adds EVs to its fleet, charging stations must be implemented at City Hall. Prices vary with the installation preference and type of charger.

Charging Station Ordinances

Prospect also lacks public EV charging. The Mayor can issue an ordinance that requires new commercial centers to have a certain number of EV parking spots per regular parking spots.

Why Electric Vehicles?

Environmental
Benefits



Cost Savings



Performance



Fleet Electrification



Prospect's Police Vehicles

- 14 Fleet Vehicles
- Replace cars at 120,000 miles (~ every 4-6 years)
- ~ \$22,000 for police equipment
- \$39,000 for current detective car (Dodge Charger)

Annual TCOs

Operating Cost	Cost	Notes
Purchase Price	\$39,000.00	Dodge Charger (non-EV)
Police Equipment Cost	\$22,000.00	
Charger Cost	N/A	
Charger Cost Annualized	N/A	
Estimated Life, Years	6	
Purchase Annualized	\$10,166.67	
Cost of Fuel	\$3.15	AAA Jefferson County estimate, unleaded
Fuel Economy	23	EPA Fuel Economy mpg equivalent, 2023
Annual Fuel Cost	\$2,100.00	
Maintenance	\$884.80	Edmunds True Cost to Own 2023
TCO Annual	\$13,151.47	

Fuel Economy	Cost	Notes
Purchase Price	\$52,495.00	Ford Mustang Mach-E GT (EV)
Police Equipment Cost	\$22,000.00	
Charger Cost	\$2,700.00	Base Level 2 Charger; Install Estimate
Charger Cost Annualized	\$337.50	
Estimated Life, Years	8	
Purchase Annualized	\$9,311.88	
Cost of Fuel	\$3.15	AAA Jefferson County estimate, unleaded
Fuel Economy	90	EPA Fuel Economy mpg equivalent, 2025
Annual Fuel Cost	\$850.00	
Maintenance	\$783.80	Edmunds True Cost to Own 2024
TCO Annual	\$11,283.18	

Charging Options

LG&E

- Host chargers through LG&E (Non-networked Clipper Creek HCS-40R)
- \$30.71 per month
- 2 Installation Options
 - **Install-Only:** Hire electrician to install power source and have LG&E physically install charger (~ \$650-\$1000)
 - **Turnkey Solutions:** Pay LG&E to install power source and physical charger (~ <\$20,000)

Third-Party Provider

- Partner with EV charging company
 - **ChargePoint**
 - **BlinkCharging**
 - **EVGo**
- ~ \$5000 to buy and install



EV Financing Options

Green Bonds

- Bonds marketed to investors focused on environmental impact.
- These bonds are similar to municipal bonds in terms of interest payments and maturity.
- The costs for the vehicles, the charging infrastructure, and the work required to implement the program could all be placed under a green bond.

CALIFORNIA TO ISSUE \$1B GREEN BONDS TO POWER LONG-TERM ESG AND CARBON NEUTRAL STRATEGY GOALS

by Anh Nguyen — 2025-07-15

The California Community Choice Financing Authority (CCCFA) is set to issue \$1 billion in green bonds to finance a 30-year supply of renewable and carbon-free energy for San Diego Community Power (SDCP), marking a major milestone in the state's push to advance its ESG objectives and long-term carbon neutral strategy.

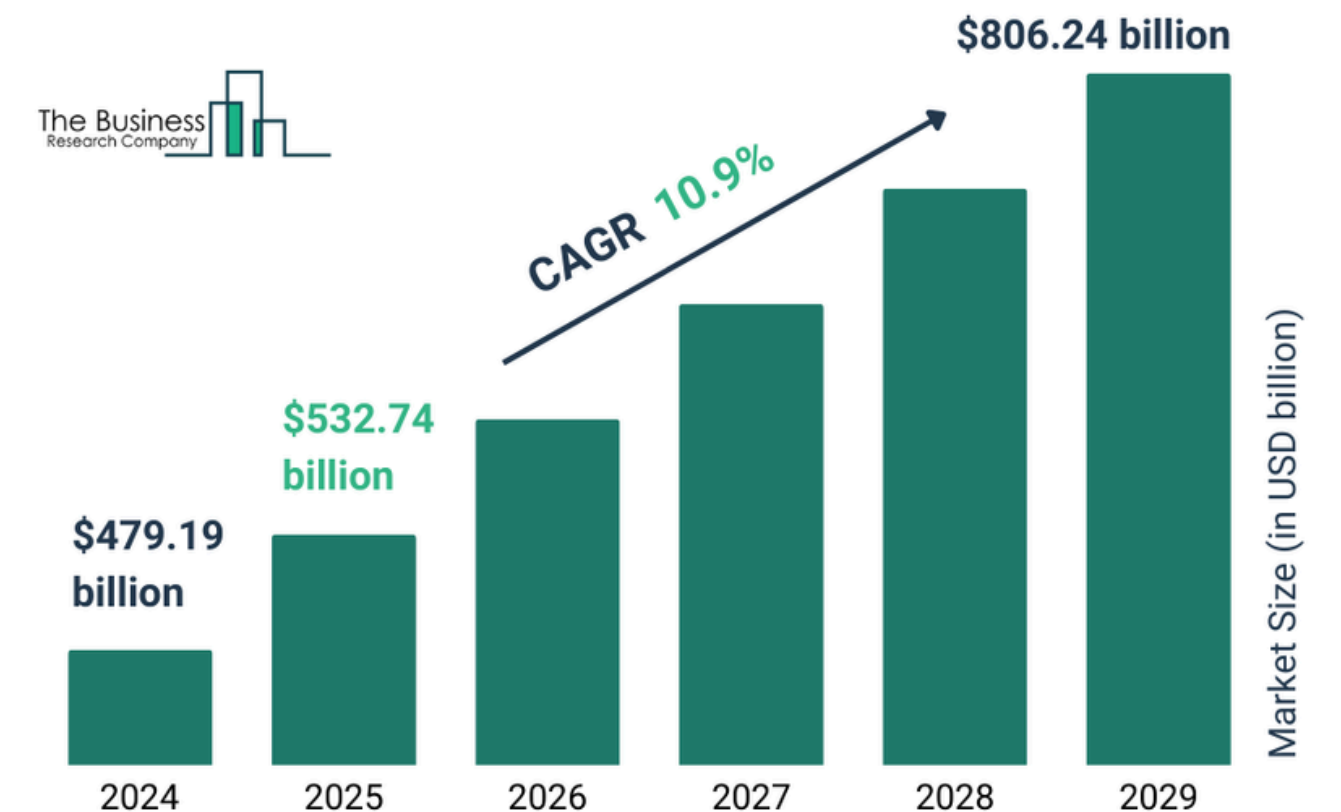
Formally titled the *Clean Energy Project Revenue Bonds*, the funds will be used to prepay for emissions performance standard (EPS)-compliant clean energy under an agreement with Energy Prepay III, a subsidiary of Morgan Stanley Capital Group. The initiative is designed to deliver stable, long-term access to renewable power sources, contributing to California's decarbonization and energy resilience goals.

The 2025D Green Bonds are expected to be delivered the week of July 14, with maturity dates spanning from 2030 to 2034, and a final term bond maturing in 2055. Morgan Stanley will underwrite the offering, which is backed by revenue from SDCP's Clean Energy Project.

Currently, SDCP services over 956,000 active accounts, representing about 7.7 million megawatt-hours of annual energy sales. The project has earned an A2 rating from Moody's, signaling strong financial backing and confidence in the long-term sustainability of the clean energy supply.

This bond issuance supports California's broader strategy to decarbonize its power grid, strengthen climate resilience, and scale

Green Bonds Global Market Report 2025





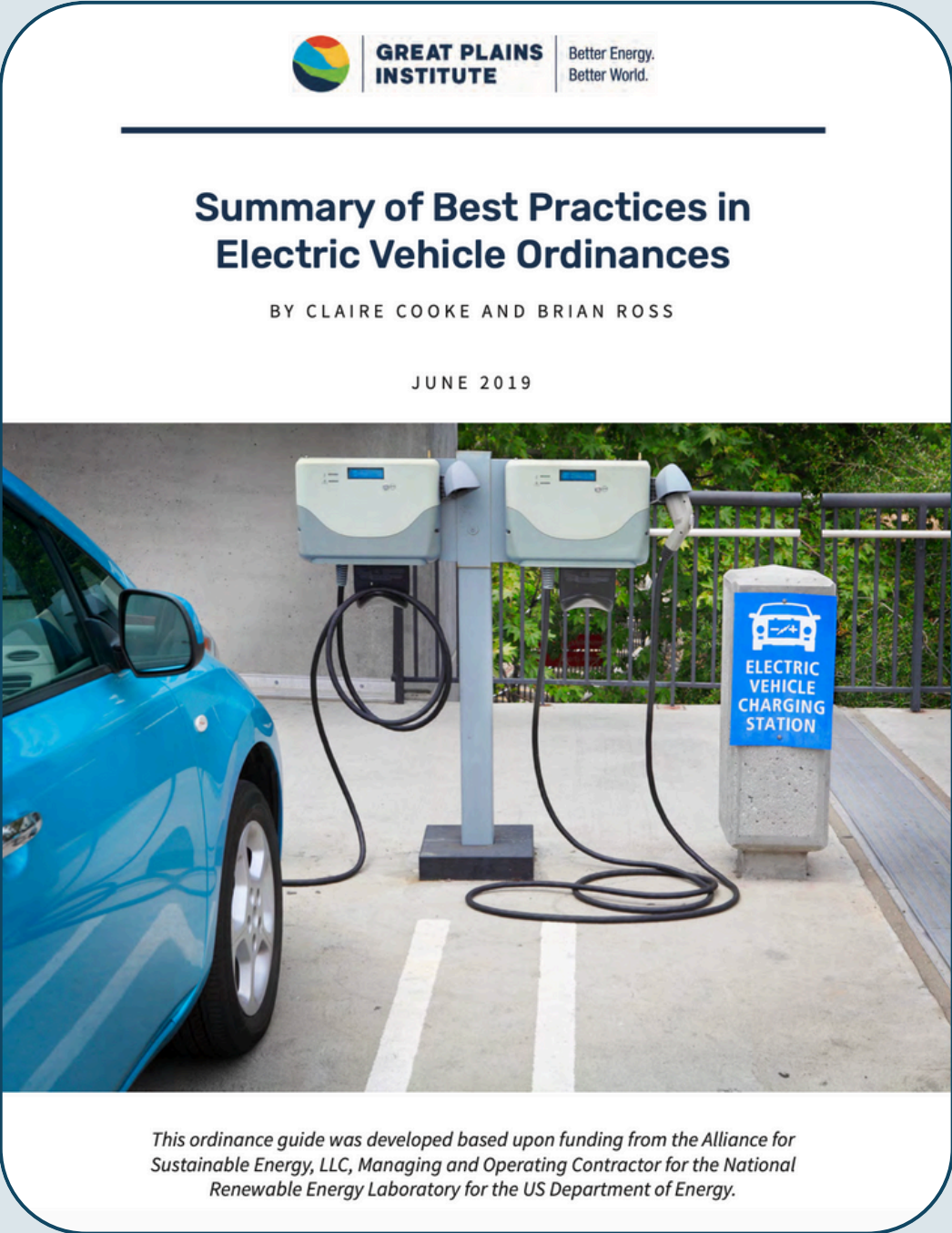
Charger Financing Options

Volkswagen Settlement

- Through the Volkswagen Environmental Mitigation Settlement, Kentucky allocated \$3,056,700 for Light Duty Zero Emission Vehicle (ZEV) infrastructure funding.
- There was roughly \$765,000 allotted for Level 2 chargers.
- Up to 50% of a charger installation project could be covered by the mitigation trust funds.

Ordinances

We highly recommend the Great Plains Institute’s “Summary of Best Practices in Electrical Vehicle Ordinances”, which is linked in the online version of our report.



Indianapolis, IN	“Two electric vehicle charging stations shall be required for developments that provide 500 or more off-street parking spaces.”	
Middletown, CT	“Any new development that requires 25 or more parking spaces, as calculated by Section 40.04 of these regulations, shall have a minimum of 1 charging space or 3% of the total number of spaces allocated to Electric Vehicles (EVs) (whichever is greater) and must have a Level 2 or 3 charging station/connection per EV parking space.”	
Salt Lake City, UT	“The number of required minimum parking spaces is determined after applying any applicable reductions and exemptions. The number of required EV parking spaces shall be as follows:”	
	Required Minimum Number of Parking Spaces	Number of EV Parking Spaces
	0 to 49	0
	50 to 99	1
	100+	2, plus 1 for each additional 100 stalls

Conclusion

Prospect/Louisville have been a wonderful home for us this summer, and we could not be more grateful for all the people we were lucky enough to meet during our time here. Keep us posted!



Thank you!

Questions?