

Saving More than Energy:

The Win-Win of Our Police Hybrid Cruisers

A Case Study of Springfield Township's
Savings from Energy Efficiency

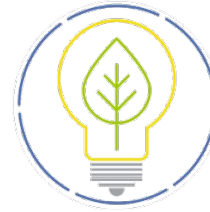
Tyler Focht

Environmental Advisory Commission
Springfield Township
April 2026



SPRINGFIELD TOWNSHIP
ENVIRONMENTAL
ADVISORY COMMISSION

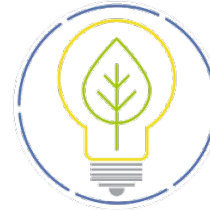
Agenda



RENEWABLE SPRINGFIELD
OUR PATH TO A CLEAN ENERGY FUTURE

- Savings Calculation Methodology
- Annual Savings
- Next Steps

Methodology



RENEWABLE SPRINGFIELD

OUR PATH TO A CLEAN ENERGY FUTURE

Data

- H1 2025 fleet fuel records
 - gallons, mileage, and cost per transaction
- H2 2025 fleet fuel records
 - Improved data and formatting, monthly gas price
- Fleet vehicle info
 - which vehicles are hybrid/gas

Calculation

- Used police vehicles only (admin were low miles and unable to tell when they switched to hybrid)
- Averaged MPG across all gas and all hybrid vehicles to calculate a gas cost per mile for each powertrain
- Calculated total gas cost savings based on total mileage (e.g. if all hybrid vehicle miles were gas vehicle miles)

H1 2025 Fuel Savings



Hybrids realize a \$0.22/mile fuel savings

- For H1 2025 the police fleet consisted of 7 hybrids and 7 gas vehicles. 2 gas vehicles were replaced with hybrids around June.
- At a gas cost/mile savings of \$0.22/mile, the hybrid fleet saved **\$12,530** in fuel costs alone over the first half of 2025 with an annual projected fuel savings of **\$25,060**
- Including maintenance, total annual savings of hybrid fleet increases to **\$29,650**
- At \$4000 price premium (2021 data), hybrid police vehicle payback period is ~18,600 miles (15 months)

METRIC	Hybrid	Gas	Total
Miles	56905	16893	73798
Gas used (gal)	3966	2816	6782
MPG	14.3	6.0	N/A
Gas cost	\$9,002.82	\$6,392.32	\$15,395.14
Gas cost/mile	\$0.16	\$0.38	N/A
Avg annual maintenance cost*	\$543.75	\$1,054	N/A

*Using 2021-24 data

H2 2025 Fuel Savings

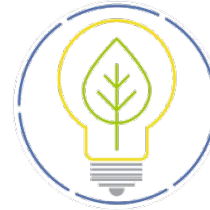


Hybrids realize a \$0.21/mile fuel savings

- The police fleet currently consists of 9 hybrids and 5 gas vehicles.
- At a gas cost/mile savings of \$0.21/mile, the hybrid fleet saved **\$13,787** in fuel costs alone over the 2nd half of 2025
- **\$26,317** in fuel cost savings in 2025
- **\$3,294** in 2025 annual savings per hybrid
- **11,667** gallons of fuel avoided in 2026
- **228,585** lbs. or **~114** tons of CO₂ emissions avoided¹
- Roughly the amount of carbon sequestered by 104 acres of U.S. forests in 1 year

METRIC	Hybrid	Gas	Total
Miles	65652	16464	82116
Gas used (gal)	5762	3017	8779
MPG	11.4	5.5	N/A
Gas cost	\$12,551.65	\$6,551.81	\$19,103.46
Gas cost/mile	\$0.19	\$0.40	N/A
Avg annual maintenance cost*	\$543.75	\$1,054	N/A

*Using 2021-24 data



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Next Steps

- Incorporate admin vehicles moving forward
- Can incorporate F150 Lightning EV into savings if desired
 - mileage data is required
- More accurate cost savings due to monthly average gas prices now included in data
- Update maintenance cost savings if updated data is available