

# **Saving More than Energy:**

## *The Win-Win of Our Energy Audits and Hybrid Cruisers*

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

**Joy Bergey**

Environmental Advisory Commission  
Springfield Township  
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SPRINGFIELD TOWNSHIP  
**ENVIRONMENTAL**  
ADVISORY COMMISSION

# Program Recap



**RENEWABLE SPRINGFIELD**

OUR PATH TO A CLEAN ENERGY FUTURE

- The Board of Commissioners committed in January 2019:
  - Getting to to **100% renewable electricity by 2035**
  - Getting to **100% fleet and building heat by 2050**
- We're making progress on both goals.
- Huge savings from *implementing* the recommendations of the summer and winter audits.

## ***Why were we wasting energy before the audits?***

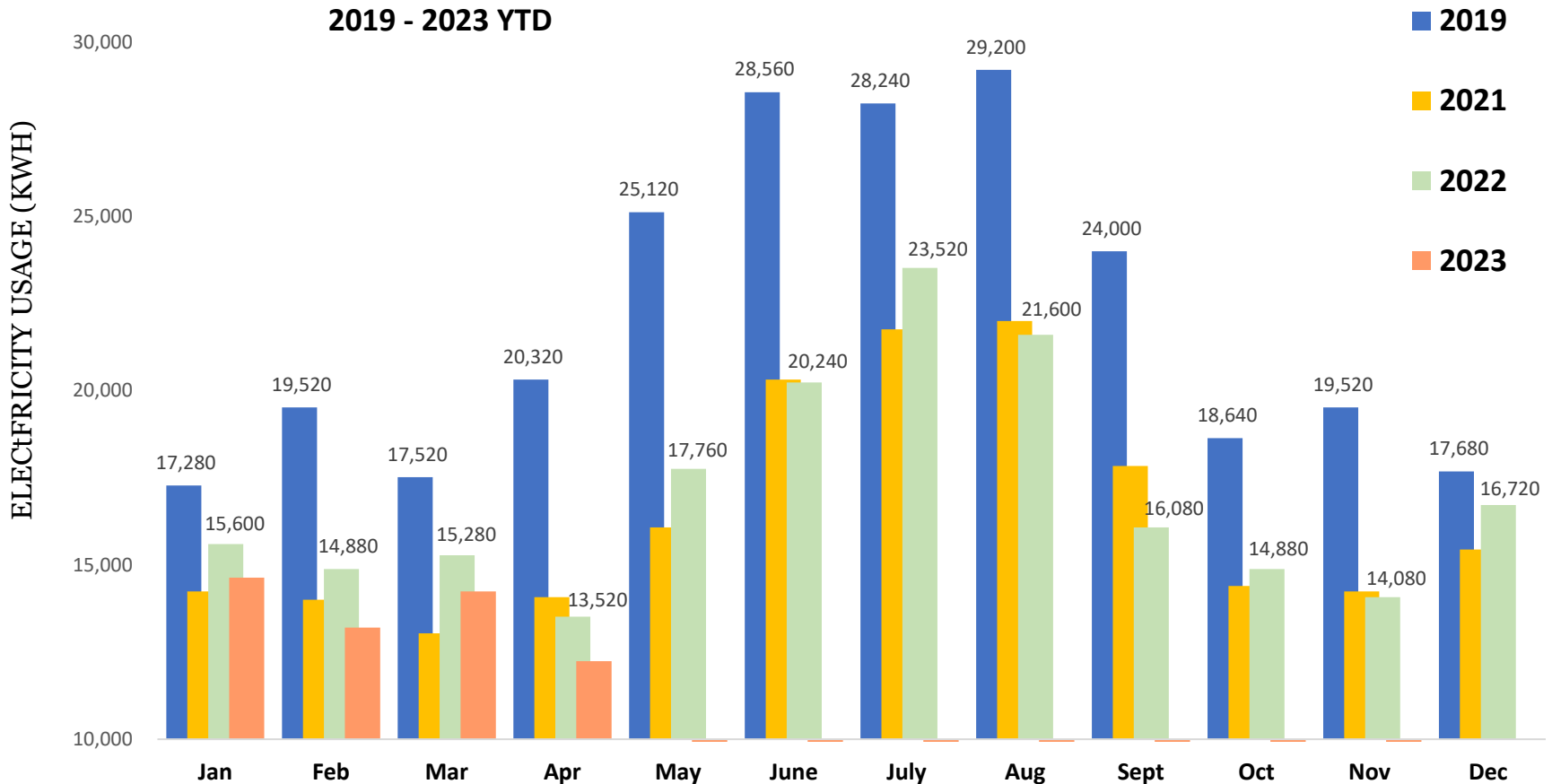
We didn't build LEED or have the HVAC system commissioned up front.

# AUDIT RESULTS: 4 Years Later



- 25% AVERAGE Reduction in Electricity

**Admin/Police building electricity usage  
2019 - 2023 YTD**

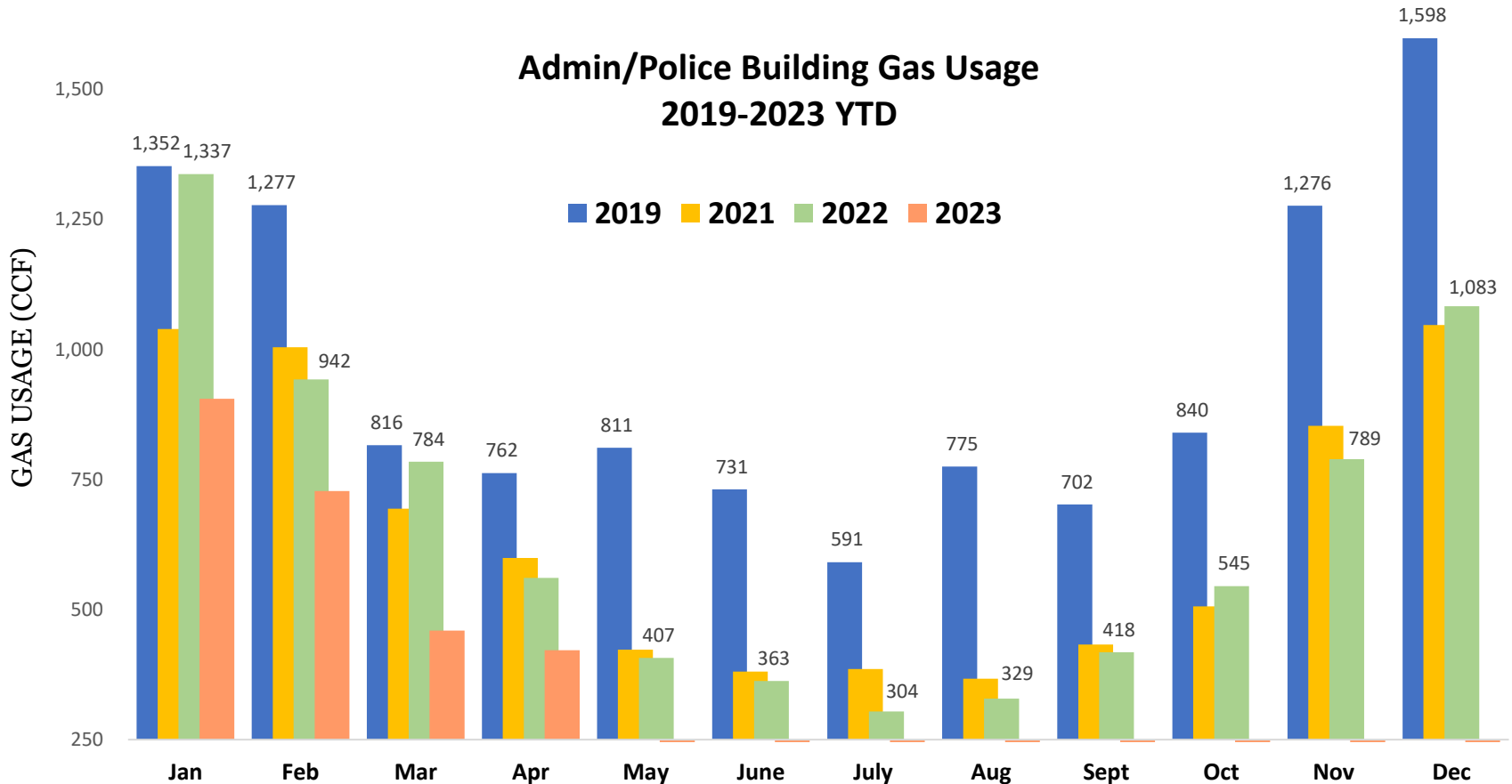


# AUDIT RESULTS: 4 Years Later



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- 34% AVERAGE Reduction in Gas Use (Admin)

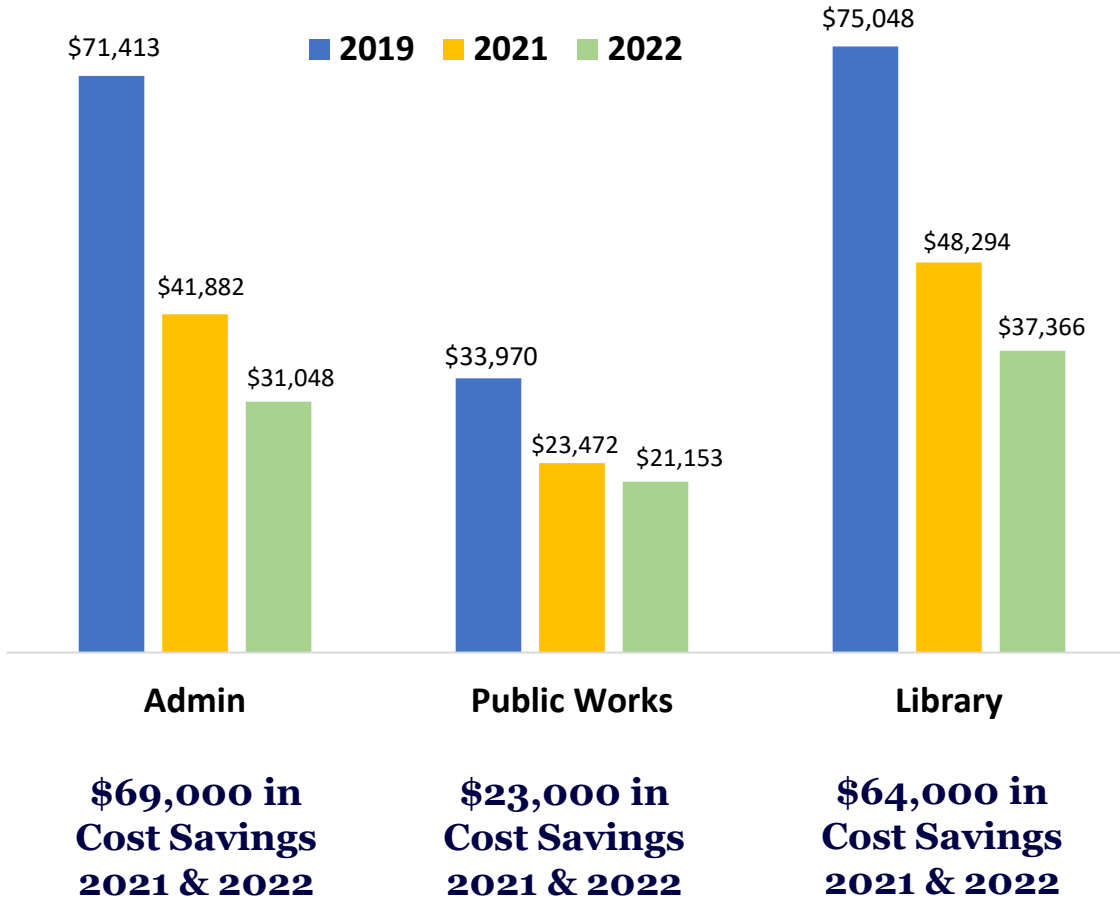


**SAVINGS 2019 v. 2022 = \$40,000 Combined Admin Elec & Gas**

# Audit savings as through 2022



## All Three Bldgs: Energy Costs (Elec. & Gas)



**Over \$194,000**  
energy cost savings in  
2021, 2022, & YTD 2023

**2021 = \$67,000**  
**2022 = \$91,000**  
**YTD 2023 = \$36,000**

**Over 149,000 lbs**  
CO<sub>2</sub> avoidance

**2021 = 84,000 lbs**  
**2022 = 50,000 lbs**  
**YTD 2023 = 15,000 lbs**

# Progress to date on township fleet



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- We got our first hybrid police cruiser in May 2021.
- We now replace each traditional police vehicle as it's retired with a hybrid.
- Roughly 50% of our police fleet are hybrids!



## How we're calculating our savings

We're tracking and comparing gasoline gallons used and miles driven before and after May 2021.

Our estimates are not perfect, since we can't disaggregate past data to track individual vehicles.

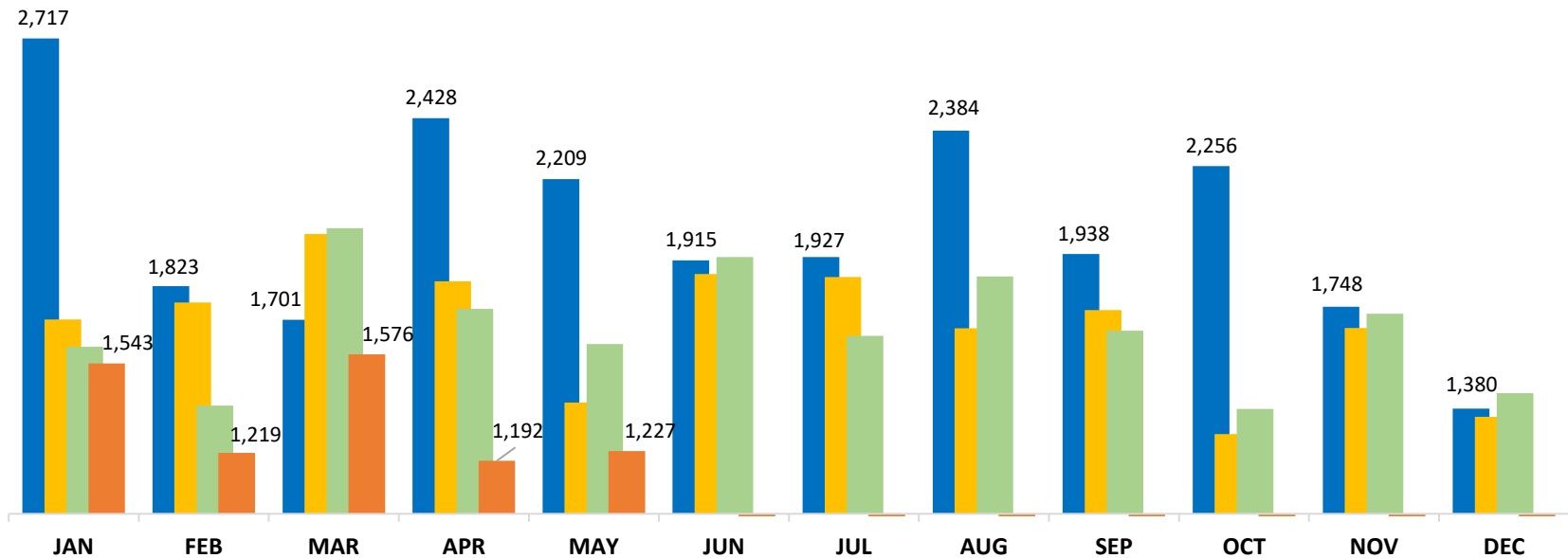
# Springfield Township Police Fuel Consumption in gallons



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Monthly Comparison 2019 - 2023 YTD (April)

■ 2019 ■ 2021 ■ 2022 ■ 2023



**We have seen an 18% reduction in gas consumption since 2019.**

**We have saved \$34,923 in fuel costs (based on annual estimates)**

## First cut assessment:



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OUR PATH TO A CLEAN ENERGY FUTURE

- Hybrids cost \$5K more than traditional vehicle.
- Fuel savings of ~\$35K cover increased purchase price of 7 hybrids.
- However...We're saving money on labor and materials costs.
- Police have driven 11,511 fewer total miles since 2019.  
*Note: We can't tease out all the reasons at this point.*
- One gallon of fuel burned generates 22 pounds of CO<sub>2</sub>.
- Hence, we have avoided **over 250,000 pounds of CO<sub>2</sub>.**

Our police officers seem happy with the vehicles.



# Looking ahead



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- Township is exploring electrical landscaping equipment,
- Full conversion of Township fleet to hybrids,
- Continued energy and emission savings,
- An enormous opportunity in building a Rec Center:

# A net-zero building!