



PROPOSED DISTRICT BUS PURCHASES and ELECTRIC VEHICLE INITIATIVE



**Central Square Central School District
December 4, 2023**

DID YOU KNOW?



-  Transportation aid is paid on general operations and on bus purchases.
-  All school districts are entitled to transportation aid, between 6.5% and 90% of their approved transportation expenses.
-  Central Square is an 88.8% aid District.
-  Districts must obtain voter approval for all bus purchases.
-  District bus purchases must also be approved by SED in order to generate Transportation Aid.
-  The net approved cost of each diesel bus is now aided according to an assumed amortization schedule of five (5) years established by the SED.
-  *The net approved cost of each school **electric bus vehicle** is now aided according to an assumed amortization schedule of twelve (12) years established by the SED.
-  Aid will be paid based upon two equal assumed semi-annual payments of principal and interest using a statewide average interest rate.
-  Aid begins 12 months after the purchase order date and will be calculated based upon the assumed debt service payments.

*** What would it look like if the District Purchased Electric Buses?**

BUS PURCHASE DEBT HISTORY

YEAR		DEBT HISTORY
2020 - 21		\$ 1,250,436
2021 - 22		\$ 1,133,059
2022 - 23		\$ 1,164,491
2023 - 24		\$ 1,483,540
2024 - 25		\$ 1,505,317
2024 – 25		\$ 3,950,974 (Electric)

PROPOSED SCHOOL DISTRICT PLAN

\$ 1,505,317 Acquisition of Buses Diesel

Type	Quantity	Total Cost
65-Passenger (Full Size)	6 @ \$176,968	\$ 1,061,808
65-Passenger (Full Size Wheelchair)	1 @ \$208,719	\$ 208,719
30-Passenger	1 @ \$105,848	\$ 105,848
24-Passenger (Wheelchair)	1 @ \$128,942	\$ 128,942
Total Acquisition		\$ 1,505,317
Estimated 3.9% Financing (over 5 years)		\$ 179,802
Total Debt		\$ 1,685,119



PROPOSED SCHOOL DISTRICT FINANCING PLAN

Estimated Debt Service

\$ 1,505,317 Acquisition of Buses Diesel

Fiscal Year Ending June 30	Balance Outstanding	Principal Paid September 15	Estimated Interest 3.9%	Total Debt Service
2026	1,505,317	280,317	58,707	339,024
2027	1,225,000	295,000	47,775	342,775
2028	930,000	300,000	36,270	336,270
2029	630,000	310,000	24,570	334,570
2030	320,000	320,000	12,480	332,480
TOTAL		\$ 1,505,317	\$ 179,802	\$ 1,685,119



PROPOSED SCHOOL DISTRICT PLAN

\$ 3,950,974 Acquisition of Buses **Electric**



Type	Quantity	Total Cost
65-Passenger (Full Size)	6 @ \$458,931	\$ 2,753,586
65-Passenger (Full Size Wheelchair)	1 @ \$503,793	\$ 503,793
30-Passenger	1 @ \$340,251	\$ 340,251
24-Passenger (Wheelchair)	1 @ \$353,344	\$ 353,344
Total Acquisition		\$ 3,950,974
Estimated 4.25% Financing		\$ 1,174,104
Total Debt		\$ 5,125,078



PROPOSED SCHOOL DISTRICT FINANCING PLAN

Estimated Debt Service

\$ 3,950,974 Acquisition of Buses **Electric**



Fiscal Year Ending June 30	Balance Outstanding	Principal Paid September 15	Estimated Interest 4.25%	Total Debt Service
2026	\$ 3,950,974	\$ 260,974	\$ 167,916	\$ 428,890
2027	3,690,000	270,000	156,825	426,825
2028	3,420,000	280,000	145,350	425,350
2029	3,140,000	295,000	133,450	428,450
2030	2,845,000	305,000	120,913	425,913
2031	2,540,000	320,000	107,950	427,950
2032	2,220,000	335,000	94,350	429,350
2033	1,885,000	345,000	80,113	425,113
2034	1,540,000	360,000	65,450	425,450
2035	1,180,000	375,000	50,150	425,150
2036	805,000	395,000	34,213	429,213
2037	410,000	410,000	17,424	427,425
TOTAL		\$ 3,950,974	\$ 1,174,104	\$ 5,125,078

HOW DO THEY COMPARE?

Type	Diesel	Electric	Difference	% Change
65-Passenger (Full Size)	\$ 176,968	\$ 458,931	\$ 281,963	2.59%
65-Passenger (Full Size Wheelchair)	\$ 208,719	\$ 503,793	\$ 295,074	2.41%
30-Passenger	\$ 105,848	\$ 340,251	\$ 234,403	3.22%
24-Passenger (Wheelchair)	\$ 128,942	\$ 353,344	\$ 224,402	2.74%



WHAT'S IN OUR FLEET?



-  **62** 65-Passenger Buses
(4 are Wheelchair Lift Equipped)
-  **23** 30-Passenger Buses
-  **2** 7-Passenger Grey Vans
-  **2** 6-Passenger Ford Explorers

89 VEHICLES

CURRENTLY...

Type C = 62 65-Passenger Buses

🚌 1 to 5 years old = **37**

🚌 6 to 9 years old = **24**

🚌 10 years or older = **1**

🚌 *Buses with*
100 - 150,000 miles = 14



Type A = 23 30-Passenger Buses

🚌 1 to 5 years old = **14**

🚌 6 to 9 years old = **8**

🚌 10 years old = **1**

🚌 *Buses over 150,00 miles = 4*

WITH 2024-25 VOTER APPROVAL...

Type C = 62 65-Passenger Buses

 1 to 5 years old = **44**

 6 to 9 years old = **18**

 10 years or older = **0**

 *Buses with
100 - 150,000 miles = 14*

Type A = 23 30-Passenger Buses

 1 to 5 years old = **16**

 6 to 9 years old = **7**

 10 years old = **0**

 *Buses with
100 - 150,000 miles = 0*



WHAT'S ON THE HORIZON...

ELECTRIC BUS VEHICLES?



- Legislation requires all newly purchased buses to be **zero-emissions** by 2027, with **100%** of all fleets transitioned by 2035.
- Approximately 50,000 school buses currently in use will have to be replaced by 2035.
- National Grid provided the District with a feasibility study and cost/rate analysis.
- Girardin Energy provided the District with a fleet study which included fleet charging and infrastructure analysis.
- Both these studies were shared with the architect and general contractor.



NATIONAL GRID FLEET ASSESSMENT REPORT

June 2022

The report included advising on site feasibility, charging capacity, future bill impacts, and evaluation of infrastructure needs.

- **Site Feasibility** - this site falls within a green zone of the distribution grid, which is an area that has > 1.5 MW of Load Capacity remaining.
- **Charging Capacity** – National Grid needs additional information
- **Future Costs** – Very “approximate” for 70 electric vehicles & SUV’s
 - ✓ \$827,800 = yearly cost
 - ✓ \$690,000 = is the average of the last 2 years of our current fuel costs
- **Infrastructure Needs** –
 - ✓ actual vehicles to be electrified
 - ✓ types of chargers to be installed
 - ✓ total miles traveled, and expected kWh consumption
 - ✓ charging profile of each charger
 - ✓ can evaluate when more information becomes known



GIRARDIN ENERGY FLEET ASSESSMENT REPORT

March 2023 Summary

This report included a more comprehensive fleet study.

Fleet Details

Number of vehicles to be electrified in the coming years: 84 buses; the fleet includes 11 spare buses. The Fleet is using a single parking site located at 28 US RT 11, Central Square.

The total number of vehicles that can be electrified with today's technologies: 51 vehicles including 11 spares.

Electrification Needs at the Bus Depot Site

Minimum recommended electrical entrance: 4000 A @ 100%, 480 volts 3 phase (or equivalent).



TOPICS OF DISCUSSION

1. Who's paying for this?

- State Aid/Building Aid
- Transportation Aid
- NYSERDA Grants

The regulations are still being worked out by the State and SED.

2. Is this initiative feasible?

Yes, with enough time and resources.

3. Voter Approval Required

- BOE and Admin will need to promote and educate the public
- A “no vote” is still something to be answered.

4. Battery - life, replacement, etc.

5. Lifts - do they need replacement?

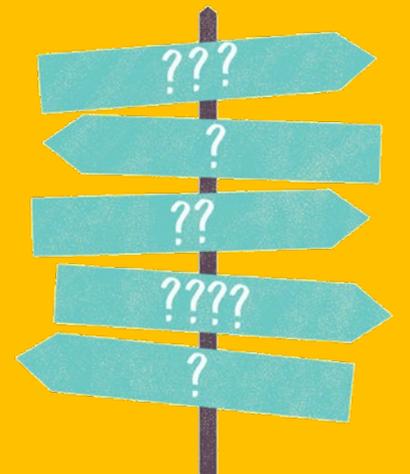
6. Mechanics – training?

7. Need to determine if we want to start the process of purchasing electric bus vehicles in January for voter approval in May. This will require BOE approval first.



TOPICS OF DISCUSSION – FOLLOW UP

8. After discussion with the BOE at the regularly scheduled December 4, 2023 meeting, it has been decided to **NOT** purchase any EV buses for the 2024 – 25.
9. We will revisit this initiative again next school year.
10. As a reminder, current legislation requires all newly purchased buses to be **zero-emissions** by 2027, with **100%** of all fleets transitioned by 2035.





Central Square Central Schools

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