Zero Emission Vehicle Strategic Plan





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August 23, 2022



Who is Wendel?

NYS Battery Electric Bus Goals

Wendel Scope of Work

NYSERDA Program

Cost to Sweet Home School District

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Wendel has a strong practice in the **transportation sector** and provides planning, design and execution services for **Battery Electric Vehicles, charging infrastructure and operation facilities**.

Wendel also has a strong **alternative fuels** group that provides consulting services for propane, compressed natural gas, battery electric vehicles and hydrogen fueled vehicles.

Services Wendel Offers:

- ARCHITECTURE
- INTERIOR DESIGN
- LANDSCAPE ARCHITECTURE

- ENGINEERING
- CIVIL
- ELECTRICAL
- ENVIRONMENTAL
- MECHANICAL
- MUNICIPAL
- STRUCTURAL
- TRANSPORTATION
- RAILROAD
- ALTERNATIVE FUEL SOLUTIONS/CNG
- WATER/ WASTEWATER RETROFITS
- LAND SURVEYING
- GEOGRAPHIC INFORMATION SYSTEMS (GIS)
- PLANNING

- ENERGY EFFICIENCY
- ENERGY AUDITS
- COMMISSIONING
- PROFESSIONALLY ASSISTED PERFORMANCE CONTRACTING
- ALTERNATIVE FUNDING/GRANT PROGRAMS
- RETROFIT AND IMPLEMENTATION DESIGN
- GREEN BUILDING DESIGN
- MEASUREMENT & SAVINGS VERIFICATION (M&V)
- RENEWABLE TECHNOLOGIES

- CONSTRUCTION MANAGEMENT
- MASTERBUILDER
- PROGRESSIVE DESIGN/BUILD
- DESIGN/BID/BUILD
- CONSTRUCTION MANAGEMENT AT RISK (CMAR)
- CM AGENT
- GMP DESIGN/BUILD

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MAP OF WENDEL OFFICES (WENDEL ICONS) AND STATES THAT WENDEL IS QUALIFIED TO DO BUSINESS IN (GREY SHADE)





250+ Employees

15 Offices Nationwide

All Electric School Buses by 2035?

Wendel has been providing clients with the switch to alternative fuels for over 30 years.

Key takeaways:

- By **2027** all new school bus purchases need to be zero- emissions and all new school buses on the road will be zero-emissions by 2035.
- The Senate is requiring the state to identify barriers to the 100% by **2035** goal so that they may be resolved early.
- New York State Energy Research and Development Authority (NYSERDA) is being tasked to provide technical assistance to school districts as they navigate the transition to 100% electric buses.

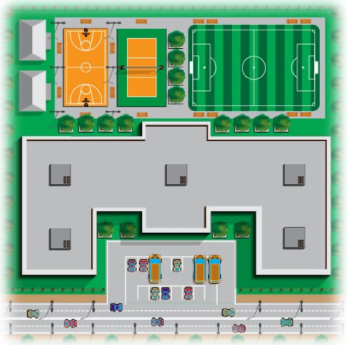


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All Electric School Buses by 2035?

Planning for this is going to create some question and concerns like:

What are the implications of Battery Electric Buses on my district's infrastructure?



What are the impacts on our bus routes?



How is the District going to pay for all this?



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Proposed Scope of Work

Project Goals –

Utilizing NYSERDA's Clean and Green Energy Solutions Program perform a study evaluating the transition to zero emission vehicles for the school bus fleet.

- Data Collection
- Bus Route Analysis
- Conceptual Charging Strategies
- Electric Utility Analysis
- Concept Development and Phasing Plan
- Transition Plan Cost Estimates

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NEW YORK STATE OF OPPORTUNITY. | NYSERDA

6,000 Schools in NYS

$1B in Annual Energy Costs

5.6M Metric Tons Carbon Dioxide

P-12 Schools – Green & Clean Energy Solutions Program (PON 4157)

Expires December 30, 2022

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Goal:

Reduce School Energy Loads and Assist Conversion to Carbon Free Fuels

75% Study Cost-Share Grant

- Non-Competitive – First Come First Serve

Eligible Projects

- Building Energy Systems (HVAC Systems)
- Renewable Energy Technologies
- Retro-Commissioning
- Fleet Electrification
- Carbon Reduction Planning

Utilize Wendel's Term Contract

- 3-4 Weeks for Purchase Order

Project Cost and Schedule

- Total Project Cost = **$81,520**
- Sweet Home School District Share = 25% or **$20,380**
- NYSERDA will contribute 75% or **$61,140**

As a NYSERDA approved contractor, NYSERDA will pay Wendel directly.

The school district will pay Wendel directly.

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Proposed Project Schedule

MILESTONE	WEEKS FROM NOTICE TO PROCEED
Task 1: Project Kickoff and Status Meetings	2 Weeks
Task 2: Data Collection	4 Weeks
Task 3: Route Analysis	6 Weeks
Task 3a: Optional Route Analysis	7 Weeks
Task 4: Conceptual Charging Strategy	10 Weeks
Task 5: Electric Utility Analysis	10 Weeks
Task 5a: Optional Analysis Vehicle to Grid	12 Weeks
Task 6: Concept Development and Phasing Plan	17 Weeks
Task 7: Transition Plan Cost Estimates	19 Weeks
Task 7a: Optional Analysis – O&M Costs	20 Weeks
Task 8: Final Report	22 Weeks

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QUESTIONS?
DISCUSSIONS
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Thank you

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