



July 18, 2022

Don Feldmann
Director of Finance and Plant Services
Sweet Home Central School District
1901 Sweet Home Road
Amherst, NY 14228

**SUBJECT: ZERO EMISSION VEHICLE STUDY
NYSERDA P-12 SCHOOLS: GREEN AND CLEAN ENERGY
SOLUTIONS PROGRAM**

Dear Mr. Feldmann,

This agreement is for the provision of professional energy services as part of the NYSERDA P-12 Schools Green and Clean Energy Solutions Program (NYSERDA PON #4157).

The Green and Clean Energy Solutions Program is available to provide funding for eligible pre-kindergarten through grade 12 (P-12) schools to reduce school energy use and assist in the conversion to carbon free fuels. The program provides cost-sharing for energy studies to investigate opportunities to reduce energy use and/or evaluate potential conversion to carbon free fuels.

A Green and Clean Energy Solutions study provides facilities owners with a study that evaluates and recommends infrastructure upgrades that the owner can use to make informed design and implementation decisions regarding reducing energy loads and assisting in the conversion to carbon free fuels. More information about the P-12 Green and Clean Energy Solutions studies can be found on NYSERDA's website:

<https://www.nysERDA.ny.gov/All-Programs/P-12-Green-and-Clean-Energy-Solutions>

As part of the NYSERDA program, you contract directly with Wendel Energy Services, LLC for 25% of the energy efficiency study costs, and NYSERDA provides a 75% cost-shared grant through Wendel's existing term contract with NYSERDA.

A. APPLICATION

Wendel has completed a NYSERDA Green and Clean Energy Solutions Program Application on behalf of Sweet Home Central School District. The application is attached to this proposal as 'Attachment A1' for review and signatory by the District.

The application authorizes NYSERDA to set aside a 75% grant for payments to Wendel for the services & deliverables outlined in the scope of work.

B. SCOPE OF WORK

The Scope of Work for the Energy Efficiency Study shall be the scope defined in 'Attachment A1' "Task Work Order Plan" of the NYSERDA Agreement. The Energy Study project tasks, deliverables, assumptions, schedule, and budget are defined in the "Task Work Order Plan".

C. NYSERDA TERMS AND CONDITIONS

NYSERDA's Terms and Conditions for the NYSERDA Green and Clean Energy Solutions Program are included in 'Attachment B'.

D. PROPOSAL FEE:

We propose to complete the Energy Efficiency Study services and deliverables as defined in the "Task Work Order Plan", for a lump sum fee of \$21,750 (Twenty One Thousand, Seven Hundred and Fifty Dollars). Invoices will be issued monthly for work completed.

This fee would be Sweet Home Central School District's total cost based on a 75% cost-shared grant through the NYSERDA Green and Clean Energy Solutions. As a NYSERDA term contractor, Wendel will invoice NYSERDA for 75% and the District for 25%. Wendel will complete and submit all necessary NYSERDA Program application information on the District's behalf.

	Professional Services Fee
Total Zero Emission Vehicle Study Cost	\$81,520.00
NYSERDA 75% Grant Funding	(\$61,140.00)
Cost Obligation to the District	\$20,380.00

Fee Notes:

- 1) Expenses such as mileage, meals, printing costs, postage, telephone charges are included in the fee.
- 2) Should Wendel be required to perform additional services beyond those outlined above, Wendel shall be compensated on an hourly or fixed sum basis for a mutually agreed scope of services.

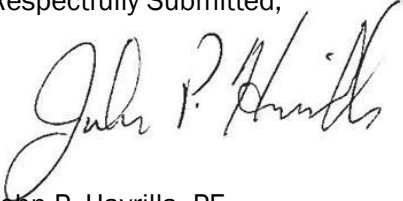
E. WENDEL GENERAL CONDITIONS:

This proposal and the attached 'Appendix A' "General Conditions of the Contract for a Study", are intended to represent the entire contractual relationship. Please contact me if you have any questions. If this

proposal and attached general conditions are acceptable to you, please indicate your acceptance by signing both originals and return one (1) executed original to our office.

Thank you for considering Wendel!

Respectfully Submitted,



John P. Havrilla, PE
Director of Alternative Fuel Vehicles
Sr. Associate Principal



Keith L. Krug, CEM
NYSERDA Program Manager
Sr. Associate Principal

Enc.

Should Wendel's proposal be accepted, Wendel Energy Services, LLC., part of a consolidated group of Wendel Companies, will contract to undertake the work. Our letterhead and reports will still prominently say "Wendel" and we will refer to ourselves as Wendel throughout the project.

ACCEPTANCE / AUTHORIZATION:

Accepted this _____ day of _____, 20_____

Print Name: _____

Signature: _____

Title: _____

RETURN TO:

Wendel
Attn: Keith Krug
375 Essjay Road, Suite 200
Williamsville, NY 14221
kkrug@wendelcompanies.com

PROFESSIONAL SERVICES TERMS AND CONDITIONS

AGREEMENT. It is mutually understood and agreed that the Client's acceptance of the agreement to which these terms and conditions are attached constitutes an incorporation of these terms and conditions which, together with any attached supporting documentation, embody and constitute the entire understanding between the parties with respect to the transaction contemplated hereby and constitute a binding legal agreement ("Agreement"). If Wendel is authorized by the Client to provide services set forth in this Agreement or a Change Order, either orally or in writing, prior to formal acceptance of either, such authorization shall be deemed an acceptance of this Agreement effective as of the date Wendel commences providing the services, and such services shall be provided and compensated for in accordance with the terms and conditions contained in this Agreement.

STANDARD OF CARE/PERFORMANCE. Wendel shall perform its services consistent with the professional skill and care ordinarily provided by design professionals practicing in the same or similar locality under the same or similar circumstances and shall perform its services as expeditiously as is consistent with such professional skill and care and the orderly progress of the work. No warranty, guarantee or fiduciary relationship, either express or implied, is made or intended by this Agreement.

OBLIGATIONS OF WENDEL. Wendel will prepare the work and deliverables in a timely manner but it is agreed between the parties that Wendel cannot be responsible for delays occasioned by factors beyond its control, nor by factors which could not reasonably have been foreseen at the time this Agreement was entered into. Wendel commits to provide adequate and qualified resources to meet the schedule, and will work with Proposal Recipient's management in a manner that enables management to make informed decisions.

OBLIGATIONS OF PROPOSAL RECIPIENT. Client will work in a diligent and timely manner with Wendel to facilitate the contractual services required herein. To ensure a cooperative and successful effort, Client will commit to open disclosure of information required for the performance of services, will properly position Wendel with its staff, and will make available subject matter knowledgeable staff in a timely manner to address questions, unforeseen circumstances or other unexpected conditions that may arise.

PAYMENT. Progress payments shall be made in proportion to services performed and shall be due and payable within thirty (30) days of invoice submittal, without retainage. Overdue invoices shall bear an interest rate of 1-1/2% per month calculated from the 31st day after submittal. Wendel reserves the right to suspend services if payment of any undisputed invoice amounts are sixty (60) days overdue.

CHANGE ORDERS. During the term hereof the scope of services and compensation therefor may be adjusted by mutually agreed upon written Change Orders hereto.

SUSPENSION AND TERMINATION BY WENDEL. If the Client (i) fails to timely make payments due, or (ii) suspends the work for more than ninety (90) calendar days for reasons other than the fault of Wendel, or (iii) substantially fails to perform in accordance with the terms of this Agreement through no fault of Wendel, then Wendel may suspend services or terminate this Agreement upon seven (7) days advance written notice to Client, and Client shall pay all sums due for services performed prior to suspension or termination and any costs attributable to suspension or termination. Upon any resumption of services, Fees and time schedules shall be equitably adjusted. Wendel may terminate this Agreement for convenience upon not less than seven (7) days written advance notice and Client shall pay all sums due for services performed prior to termination.

SUSPENSION AND TERMINATION BY CLIENT. If the Client suspends the work, Wendel shall be compensated for services performed prior to notice of such suspension and Client will be liable for any expenses incurred in the interruption and resumption of services. Upon resumption of services, Fees and time schedules shall be equitably adjusted. If the Client terminates this Agreement for its convenience, the Client shall compensate Wendel for Wendel's services performed prior to termination, reimbursable expenses incurred, and costs attributable to termination, including the costs attributable to Wendel's termination of consultant agreements. Client may terminate this Agreement for default upon not less than seven (7) days' advance written notice should Wendel substantially fail to perform in accordance with the terms of this Agreement through no fault of the Client.

HAZARDOUS MATERIALS. To the fullest extent permitted by law, Client shall defend, indemnify and hold harmless Wendel, its affiliates, subconsultants and subcontractors, and their respective officers, directors, partners, employees, and agents from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) caused by, arising out of, or relating to the presence, discharge, release, or escape of asbestos, PCBs, petroleum products, radioactive materials, or any other hazardous materials at, on, under, or from the work site.

OWNERSHIP OF DOCUMENTS. All the documents, reports, boring logs, field data, field notes, laboratory test data, calculations, estimates, drawings, specifications and other documents, data or information prepared by Wendel in any form, including machine readable format, (collectively "Documents") are instruments of Wendel's services and shall remain the sole property of Wendel. Wendel retains all ownership and all other rights, including copyrights, in all such documents.

LIMITATIONS ON USE OF DOCUMENTS. The Documents are prepared for use for the purpose and at the site identified in the Agreement or Change Order only and are not appropriate for use for any other purpose or site, except by the authorization and agreement in writing with the appropriate compensation to Wendel. Client agrees to release Wendel and its affiliates from any

PROFESSIONAL SERVICES TERMS AND CONDITIONS

liability associated with any unauthorized changes made to the Documents and their use thereof and further agrees to indemnify and hold harmless Wendel and its affiliates from any and all claims arising out of such changes or use.

MACHINE READABLE MEDIA. Where Wendel agrees to supply some or all of the Documents in machine readable format (hereinafter "machine readable media"), the parties understand and agree that any Documents supplied in such machine readable format are so supplied as a convenience to the recipient. Such Documents are not intended to replace the printed forms of such Documents. The content of the Documents supplied by Wendel in printed form shall govern over the contents of Documents supplied in machine readable format. The recipient shall be solely responsible for comparing the output of the machine readable media with the printed Documents designated by Wendel as the contract documents and determining the accuracy of such output. Recipient shall only use the output of machine readable media for the limited purpose agreed to by Wendel and shall not alter, mediate or change the contents of such machine readable media in any way, or transfer to others, without the express written approval of Wendel.

CONFIDENTIALITY. Wendel shall not disclose or permit the disclosure of any confidential information except to its employees of Wendel and its affiliates, and other consultants who need such confidential information in order to meet contractual obligations under this Agreement.

PUBLICATION. Wendel has the right to photograph the work and to use the photos in the promotion of its professional practice through advertising, public relations, brochure or other marketing materials. Client agrees that Wendel has the authority to utilize its name as a client and general description of the work or service performed as references. Wendel will be given proper credit and acknowledgements for all services rendered including, but not limited to, planning, design and implementation. Proper credit shall be defined as being named by the Client (or their agent/owner) in project identification boards, published articles, promotional brochures and similar communications.

DISPUTE RESOLUTION. In an effort to resolve any conflicts that arise during the design or construction of the work or following the completion of the work, the Client and Wendel agree that all disputes between them arising out of or relating to this Agreement shall be submitted to non-binding mediation unless the parties mutually agree otherwise. The parties further agree to include a similar mediation provision in all agreements with independent contractors they retained for the work and to require all independent contractors and consultants to include a similar mediation provision in all agreements with their respective subcontractors, subconsultants, suppliers or fabricators retained, thereby providing for mediation as the primary method for dispute resolution between the parties to those agreements. In the event resolution of any conflict cannot be settled as a result of non-binding mediation, it will be addressed in an appropriate court of proper jurisdiction.

LIABILITIES. THE CLIENT AND WENDEL HAVE DISCUSSED THEIR RISKS, REWARDS AND BENEFITS OF THE WORK TO BE PERFORMED, WENDEL'S TOTAL FEE FOR SERVICES AND HAVE ALLOCATED THE RISKS SUCH THAT, UNLESS STATED OTHERWISE ELSEWHERE IN THIS AGREEMENT, THE CLIENT AGREES THAT TO THE FULLEST EXTENT PERMITTED BY LAW, WENDEL'S TOTAL LIABILITY TO THE PROPOSAL RECIPIENT FOR ANY AND ALL INJURIES, CLAIMS, LOSSES, EXPENSES, DAMAGES, OR CLAIM EXPENSES ARISING OUT OF THIS AGREEMENT FROM ANY CAUSE OR CAUSES INCLUDING, BUT NOT LIMITED TO, WENDEL'S NEGLIGENCE, ERRORS, OMISSIONS, STRICT LIABILITY, BREACH OF CONTRACT OR BREACH OF WARRANTY SHALL NOT EXCEED THE TOTAL COMPENSATION RECEIVED BY WENDEL UNDER THIS AGREEMENT OR \$500,000.00 WHICHEVER IS LESS.

INDEMNITY. Each Party agrees to indemnify the other from liability for losses, damages, or expenses (including reasonable costs and attorney's fees) to the extent caused by the Party's negligent acts, errors, or omissions relating to this Agreement, subject to any limitations of liability set forth elsewhere herein.

CONSEQUENTIAL DAMAGES. NEITHER PARTY WILL BE RESPONSIBLE TO THE OTHER FOR ANY SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES.

BUDGET/CONTINGENCY. The Client agrees to establish a realistic budget for the cost of the work; the budget will include a contingency fund which will be used solely for the purpose of paying for contractor change orders, addressing omissions from the construction documents, and Client approved Change Orders for Wendel's services.

OPINIONS OF CONSTRUCTION COST. Any opinion of construction cost prepared by Wendel represents its judgement as a design professional and is supplied for the general guidance of the Client. Since Wendel has no control over the cost of labor and material, or over competitive bidding or market conditions, Wendel does not guarantee the accuracy of such opinions as compared to contractor bids or actual cost to the Client.

FORCE MAJEURE. Neither Party shall hold the other responsible for damages or delays in performance caused by acts of God, strikes, lockouts, accidents or other events beyond the control of the other or the other's employees and agents.

PURCHASE ORDERS. Client acknowledges and agrees that any purchase order issued by Client in accordance with this Agreement is intended only to establish payment authority for Client's internal accounting purposes. No purchase order shall be considered to be a counteroffer, amendment, modification, or other revision to the terms of this Agreement.

WAIVER. No waiver by either Party hereto or any failure or refusal by the other Party hereto to comply with its obligations hereunder shall be deemed a waiver of any other or subsequent failure or refusal by such Party to so comply.

PROFESSIONAL SERVICES TERMS AND CONDITIONS

GOVERNING LAW. This Agreement shall be governed by and construed in accordance with the laws of the state in which the work or Project is located, without regard to principles of conflict of laws.

THIRD PARTY BENEFICIARIES. This Agreement is made solely for the benefit of the Client and Wendel, their successors and assigns, and no other person shall have any right, benefit or interest under or because of this Agreement.

AUTHORITY. Each Party represents and warrants to the other that it has the requisite authority to accept, deliver and perform this Agreement.

APPLICATION (ATTACHMENT A)

P-12 Schools: Green and Clean Energy Solutions (PON 4157)



NYSERDA

Submit complete application packages to P12Schools@nyserda.ny.gov. For ease of identification, all electronic files should be named using the Applicant's name in the title of the document. Please refer to Program Opportunity Notice (PON) 4157 Section IV. Cost-Sharing for full eligibility and complete application package requirements.

Applications may be submitted by the school, school district, or by a representative authorized by the school. Incentives will be distributed to the Applicant. One Program Application may be submitted for multiple offerings and buildings operated by a single school or school district. Email questions to P12Schools@nyserda.ny.gov.

APPLICANT INFORMATION

Sweet Home Central School District

Applicant Legal Name

Parent Company / Main School District Name

1901 Sweet Home Road	Amherst	NY	142
Address	City	State	Zip
Donald Feldmann	Director of Finance and Plant Services		
Contact Name	Title		
716-250-1406		dfeldmann@sweethomesch	
Phone (include area code)	Extension	Email Address	

SCHOOL OR SCHOOL DISTRICT INFORMATION

Donald Feldmann	Director of Finance and Plant Services		
School Building Contact Name	Title		
1901 Sweet Home Road	Amherst	NY	142
Address	City	State	Zip
Contact Name	Title		
716-250-1406		dfeldmann@sweethomesch	
Phone (include area code)	Extension	Email Address	

Number of School Buildings Included: ⁶_____

Do all schools named on the application contribute to the System Benefits Charge (SBC) on their electric utility bill?

☒ Yes ☐ No

Electric Utility Company: National Grid

Annual Energy Costs: \$16,000.00

**Note: NYSERDA cost share is capped at 10% of annual energy expenditures*

Building Ownership Type: ☒ Public ☐ Private ☐ Charter

Please indicate which program offerings you intend to apply for under this application (select all that apply):

☒ **Energy Studies:** Eligible schools may receive cost-sharing for energy studies focused on load reduction and opportunities for conversion to carbon free fuels.

☐ **Clean Heating and Cooling and/or Net Zero Design:** Eligible schools may receive cost-sharing for the design of Clean Heating and Cooling and/or Net Zero projects.

P-12 SCHOOLS: GREEN AND CLEAN ENERGY SOLUTIONS TERMS

I, the Applicant, certify that the school(s) or school district named in the application, Attachment A, are interested in receiving cost-shared services through PON 4157. The Applicant and/or the School or School District certifies that the information provided is true to the best of their knowledge. As part of study or design projects, NYSERDA will oversee the third party energy consultant's progress and results in completing the scope of work, provide technical review of any applicable deliverable, and be available to address any questions or concerns which arise during the conduct of this project.

The Applicant and/or the School or School District certifies that NYSERDA does not provide any endorsement of the third party energy consultant's capabilities to provide services outside of the Scope of Work to be conducted pursuant to this agreement. Applicant and/or the School or School District acknowledges that NYSERDA is not responsible for assuring that the design, engineering, or installation of any recommendation of the technical service is proper or complies with any particular laws (including patent laws), codes, or industry standards.

The Applicant and/or the School or School District understands that this application may not be approved if the requirements of the Program are not met. The Applicant and/or the School or School District understands that services through the Program are contingent on compliance with the Program Terms and Conditions, Attachment B of PON 4157.

NYSERDA does not make any representations of any kind regarding the results to be achieved or the adequacy or safety of any recommendation. NYSERDA does not endorse, guarantee, or warrant any particular manufacturer or product, and NYSERDA provides no warranties, expressed or implied for any product of service.

I understand that by signing below I, the Applicant and/or the School or School District, am certifying that:

- 1) I am authorized to commit my organization to the terms of this Application; and
- 2) I have read, understand, and agree to the Program terms and conditions, Attachment B.

I, the School or School District, authorize the New York State Energy Research and Development Authority (NYSERDA), and its designated representatives, to access energy billing and consumption data for the participating site(s). This authorization automatically terminates at the end of eight years following the execution date of the Purchase Order associated with this Application. I authorize NYSERDA, and its designated representatives, to access and utilize any and all energy consumption information and data. I understand that this information will be used to evaluate energy use patterns for the purpose of measuring energy performance and determining the potential and actual energy savings resulting from evaluated or implemented energy projects. Participating site(s) agree to cooperate with activities designed to evaluate program effectiveness, such as responding to questionnaires and allowing on-site inspection and measurement of installed measures. I understand that NYSERDA is subject to the NYS Freedom of Information Law, Public Officers law, Article 6, and that NYSERDA cannot guarantee confidentiality of any information submitted.

I, the Applicant and/or the School or School District, authorize NYSERDA to add me to the mailing lists and to share my information with New York State government and other entities doing business on NYSERDA's behalf. I reserve the right to unsubscribe at any time.

The Applicant certifies the number provided is the correct taxpayer or employer identification number (or I am waiting for a number to be issued to me); I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and I am a U.S. citizen or other U.S. person (as defined in IRS Form W-9).

AUTHORIZED SIGNATORY

Signatory must be authorized to represent the school(s) or school district named on the application, Attachment A.

SIGNATURE: _____

NAME AND TITLE: Donald Feldmann, Director of Finance and Plant Services

FEDERAL ID#: _____

SCHOOL OR SCHOOL DISTRICT SIGNATORY *(if not the Applicant)*

I, the school or school district, authorize the Applicant to participate in the Green and Clean Energy Solutions Program on behalf of the school or school district named on the application, Attachment A. I have read P-12 Schools: Green and Clean Energy Solutions Program and agree to all Program Terms and Conditions. I acknowledge and understand that all program funds and incentives will be distributed to the Applicant.

SIGNATURE: _____

NAME AND TITLE: Donald Feldmann, Director of Finance and Plant Services

SCHOOL OR SCHOOL DISTRICT: Sweet Home Central School District

PHONE: _____

ATTACHMENT “A1”

SCOPE OF WORK

SWEET HOME CENTRAL SCHOOL DISTRICT

NYSERDA P-12 SCHOOLS: CLEAN & GREEN ENERGY SOLUTIONS PROGRAM PON 4157

PROJECT DESCRIPTION

Goal of the Study

Sweet Home Central School District is interested in utilizing NYSERDA's Clean and Green Energy Solutions Program to perform a study evaluating the transition to zero emission vehicles for their school bus fleet.

Sweet Home Central School District has been reviewing the National transition to battery electric vehicles, and more recently, New York State's requirements for transition of school bus fleets to zero emission vehicles by 2035. The School District is interested in developing a transition plan that provides a path towards a zero-emission bus fleet by 2035.

Consultant Information

The District seeks to utilize the services of Wendel Energy Services, LLC, a long tenured NYSERDA Program Consultant. Wendel's contact information is as follows:

Wendel Energy Services, LLC
375 Essjay Road, Suite 200
Centerpointe Corporate Park
Williamsville, New York 14221

Wendel's NYSERDA Program Manager; Keith L. Krug, CEM kkrug@wendelcompanies.com

District and Facility Description

The Sweet Home Central School District located in the towns of Amherst and Tonawanda, New York owns and maintains six facilities and provides public educational services to approximately 3,350 students and employs approximately 1,010 staff. The district covers an area of 22.75 square miles and has an annual budget of \$83,347,000. The bus fleet consists of 65 buses ranging from 30-65 passengers.

Based on discussions between the District and Wendel personnel, the following will be evaluated to determine the transition to a zero emission vehicle plan.

Utility Information

All school buildings pay into the electric Systems Benefits Charge (SBC) on their respective invoices.

Electric is delivered to the District by National Grid. Sweet Home Central School District's annual electric costs are approximately \$16,000.00.

PROJECT TASKS

An effective vehicle electrification plan should consider the following key items:

Vehicle Information	Local Utility Capacity
Vehicle types and counts	Availability of required capacity
Vehicle Duty Cycle – including <i>operational hrs.</i>	Reliability/redundancy of power feeds
Vehicle Replacement Cycle	Cost of system upgrades to the client
Vehicle Storage Location(s)	Timing of system upgrades
Available EV Vehicle Configurations & Timing	Site Electrical Distribution
Vehicle types	Existing spare capacity
Available battery sizes	New distribution requirements
Available charging configurations	Operational impacts
Available EV Charging Infrastructure	Future Technology Expectations/Impacts
Level II and Level III chargers	Battery sizes
Plug-in chargers	Charger sizes & configurations
Induction chargers	
Vehicle-to-Grid Charging	
EV Implementation Cost Factors	EV Implementation Schedule Factors
Vehicle cost differences	Phasing of implementation
Utility system upgrade costs	Vehicle replacement schedules
Internal electrical distribution upgrade costs	Utility system upgrades
O&M cost implications (Maintenance)	Internal distribution system upgrades
O&M cost implications (Fuel/Energy)	
Back-up power supply costs	
Site Constraints – Space for equipment	Staff Training
Utility equipment	Driver training on electric vehicles
Internal electrical distribution equipment	Maintenance training – HV DC systems
Charging equipment – chargers	
Charging equipment - dispensers	

The steps necessary to develop a zero-emission transition plan for the school bus fleet are listed below:

Task 1–Project Kickoff and Status Meetings

- Kickoff with the District, NYSERDA, and Wendel
- Determine appropriate meeting schedule based on work effort
- Deliverables for this task will be meeting minutes

Task 2 – Data Collection

- **Bus fleet information** – Fleet size (current and projected), bus replacement plan/schedule, bus types/size
- **Bus schedules and route data** – Detailed bus routes, departure and return times, operational hours, mileage, fuel consumption, operational contingency/resiliency plans.
- **Bus parking/storage arrangements** – Indoor/Outdoor, location
- **Fueling**- current operational requirements for fueling
- **Utility Data** – Name of local utility, existing service size (kVA) and voltage, Utility contact
- **Existing School Electrical Distribution information** – existing capacity, condition, expansion capability. Any as-built electrical site drawings (one-line distribution drawings)

- **Existing Site Plan** – CAD file of overall site plan

Task 3 – Route Analysis

Wendel will analyze the available bus route data for each route to determine the time and distance required for a bus to complete the route. Fuel consumption data from the existing diesel fleet will also be incorporated into the analysis. This analysis will be used to develop anticipated energy requirements per route and to determine minimum battery size requirements, charging requirements, and charging durations necessary for each route.

Anticipated deliverables for this step would be:

A memorandum detailing the results of the route analysis including recommended minimum bus battery size.

Task 3a - Optional Route Analysis

Each school bus manufacturer has a different bus battery and charger configuration that they offer. This includes different battery capacities as well as charger levels and outputs. Wendel will analyze up to four bus manufacturers/types of buses on the existing bus routes to determine the relative performance of each bus configuration.

Task 4 – Conceptual Charging Strategy

Based on the data collected in Step 1 and the route analysis developed in Step 2, Wendel will develop a conceptual charging strategy for the fleet. The charging strategy will be developed the smallest available battery size that meets the districts route needs. The charging strategy will identify the following items:

1. Number, types and sizes of chargers required to charge the fleet in the allotted time frames – assuming 15% SOC lower limit to 90% SOC upper limit.
2. Anticipated peak demand during both on-peak and off-peak utility periods
3. Optimum charger size and configuration – 1 to 1 or 1 to many chargers to dispensers

Anticipated deliverables for this step would be:

A memorandum detailing the results of the charging strategy

Task 5 - Electric Utility Analysis

Meetings with the local utility would be scheduled to engage them in the project early on. Once new loads are identified, the utility would provide options for providing the required new capacity to the site. Wendel would work with the utility to determine what the overall costs of the utility upgrades would be and what portion of those costs would be born by the school district and its stakeholders.

Based upon the developed energy requirements and charging strategy, Wendel will work with the local utility to determine the charging load profile, power demand and options for obtaining the power from the utility. Items included in this analysis include:

1. Utility's ability to supply the required power for bus charging
2. Preferred utility power interface:
 - a. Upgrade existing service to supply all needs

- b. Provide a new service for just the bus charging requirements
- c. Reliability of bus charging service feed
- d. Potential off-site back-up options for the bus charging, including a second feed from a different substation - Redundancy options and reliability data would be reviewed to determine the reliability of the new feeds that may be necessary for fleet electrification.

Anticipated deliverables for this step would be:

A memorandum identifying the utilities ability to provide the required power and the utilities preferred means of supply for the bus charging power to the site.

Task 5a- Optional Analysis – Vehicle-to-Grid Charging Analysis

Wendel will analyze the periods when a bus is parked at the school and connected to the charger. We will evaluate the amount of time the bus has to charge, the amount of time required to complete the charge for the next route.

We would then determine the time of day that the bus would be connected to the grid and available for supplying power to the grid through the charger. We would analyze the estimated amount of energy available from the connected buses for a grid emergency through the Vehicle-to-Grid chargers. This analysis would also take into account the amount of energy the buses would need to complete the next route when necessary.

Working with the utility, we would then evaluate the potential benefits to the school district and the utility to implementing a Vehicle-to-Grid charging solution.

Task 6 – Concept Development and Phasing Plan

Working with the school district, Wendel will develop a conceptual plan for the electrification of the fleet over time. This will be a phased approach based on available funding cycles, fleet replacement schedules, utility system build out schedules, and internal distribution system build out schedules. Phasing to allow for growth in infrastructure without replacing previous phase investments would be one of the goals of the phasing plan.

The existing internal electrical distribution system would be reviewed to determine the existing systems ability to handle additional load and to determine where new distribution equipment may be located, including new transformers, switchgear and panelboards. Potential locations for charging equipment would be identified at this stage as well.

The concept plan will include the following items:

- 1. Preferred utility interface equipment (transformers, incoming switchgear, etc)
- 2. On-site distribution equipment including distribution switchgear/panelboards, transformers and wiring to the chargers
- 3. Charger types, sizes, locations and number of dispensers
- 4. Dispenser connections to the bus fleet

Anticipated deliverables for this step would be:

- A. A conceptual site plan showing preferred equipment locations
- B. A conceptual one-line power diagram showing the incoming utility power and bus charging distribution

- C. A phasing plan showing how the implementation plan would progress over time to meet the 2030 transition plan goal.

Task 7 – Transition Plan Cost Estimates

Working with the school district, Wendel will develop a high-level opinion of probable costs to implement the zero-emissions transition plan. The estimate will include the phased implementation costs of the following major items:

1. School District portion of any estimated charges for the utility to upgrade the system to provide the power required to the site for bus charging
2. Electrical equipment and installation costs for the utility interface
3. Bus charging system distribution equipment and installation costs including switchgear, panelboards, wiring.
4. Charger and dispenser and installation costs
5. Associated sitework and civil costs
6. Wendel would be looking for the School District to provide estimated costs for the school buses for inclusion into the overall phased implementation costs

Anticipated deliverables for this step would be:

An Opinion of probable cost estimate for each phase of the implementation phasing plan.

Task 7a - Optional Analysis – O&M costs

A review of the phasing on operations and maintenance, avoided costs where feasible, and O&M costs will be estimated. This will include an estimate of maintenance savings for BEB's, estimated energy costs for bus charging, fuel/diesel costs, and workforce training costs.

Task 8 – Final Report

Wendel will prepare a draft memo report to summarize the overall recommendations and results of the study.

Tasks

Below is an itemized task list that is represented in the proposed budget attached.

1. Project Kickoff and Status Meetings
2. Data Collection
3. Route Analysis
 - a. Optional Route analysis
4. Conceptual Charging Strategy
5. Electrical Utility Analysis
 - a. Optional analysis- Vehicle-to-grid Charging Analysis
6. Concept Development and Phasing Plan
7. Transition Plan Cost Estimate
 - a. Optional analysis- O&M Costs

DELIVERABLES

Wendel will provide the following deliverables:

- Task 1 Project Kickoff and Status Meetings: meeting minutes

- Task 2 Data Collection: compilation of the data review.
- Task 3 Route Analysis: one memo detailing the resulting of the route analysis including recommended minimum bus battery size
- Task 3a Optional Route Analysis: one memo detailing results of the route analysis including different battery capacities and charger levels and outputs
- Task 4 Conceptual Charging Strategy: one memo detailing the results of the charging strategy
- Task 5 Electric Utility Analysis: one memo identifying the utility's ability to provide the required power and utility's preferred means of supply for bus charging power to the site
- Task 5a Optional Analysis- Vehicle to Grid Charging Analysis: one memo detailing the results of the vehicle to grid charging analysis
- Task 6 Concept Development and Phasing Plan:
 - one conceptual site plan showing preferred equipment locations
 - one conceptual one-line power diagram showing the incoming power and bus charging distribution- one phasing plan showing how the implementation plan would progress over time to meet the 2030 transition plan goal
- Task 7 Transition Plan Cost Estimates: one opinion of probable cost estimate for each phase of the implementation phasing plan
- Task 7a Optional Analysis- O&M costs: one estimate of maintenance savings for battery electric buses and estimates energy costs for bus charging
- Task 8: Wendel will prepare a draft memo report to summarize the overall recommendations and results of the study

ASSUMPTIONS

In preparing this proposal, Wendel has made the following assumptions regarding the Task Work Order:

- Access to electrical rooms
- Access to and accompaniment by facility staff to tenant spaces will be provided
- Access to building management software systems will be provided
- As built and survey, if available will be provided
- Access to site
- The owner will provide two years worth of electric costs.
- A draft report will be reviewed by both the owner and NYSERDA simultaneously, with each party providing one set of review comments. Wendel will update the draft report once based on the written comments. Comments from NYSERDA's project manager/technical reviewer will be coordinated, so that one combined set of comments will be addressed by Wendel

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: Electrical Utility Analysis	4 weeks
Task 5a: Optional Analysis- Vehicle-to-Grid Charging Analysis	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	2 weeks

PROJECT BUDGET

The total cost to complete the tasks associated with the scope of work is \$81,520.00. The District will contribute 25% or \$20,380.00 and NYSERDA will contribute 75% or \$61,140.00, as specified in the NYSERDA purchase order.

This is the total fee and includes direct expenses such as mileage, postage, printing, instrumental rental, subcontractors, etc. except as noted.