

## **Tribal Renewable Energy – Final Report**

**Recipient Organization:** Oneida Indian Nation

**Project Title:** Oneida Nation Energy Master Planning Project

**Covering Period:** September 1, 2017 through November 30, 2018  
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## Executive Summary

The Oneida Indian Nation is committed to continually improving and enhancing its environmental performance, which includes pollution prevention, waste reduction, the wise use of both renewable and nonrenewable resources, and the conservation of energy, while also encouraging economic development to support the needs of its operations, programs, and members. To support this commitment, the Nation engaged firm, The Weidt Group, an experienced building energy consultant, to perform an initial baseline energy analysis on Nation-owned buildings, using the Department of Energy Office of Indian Energy's First Step Planning grant funds.

The **goal** of this recently completed project was to conduct a baseline energy analysis of all Nation properties and facilities in order to meet the **objectives** of: (1) establishing a system for setting energy efficiency improvement goals; (2) developing an evaluation tool to assist with future comparison of energy usage; and (3) providing a comprehensive analysis of energy consumption to enable the development of a plan that will result in less use of energy, increase energy efficiency in tribal buildings, and increase available funding to meet the Nation's economic and environmental priorities.

The Nation's internal team, consisting of the Project Director, Project Manager, Turning Stone Resort and Casino Director of Facilities, Turning Stone Resort and Casino Director of Engineering, Nation Director of Facilities, and the Technical Contact, worked closely with The Weidt Group during the 15-month project to complete an energy audit of 40 Nation-owned buildings. Buildings varied widely in size, use, and location. The Weidt Group's work consisted of:

- **Benchmarking analysis.** Utility data (electricity, natural gas, liquefied petroleum gas, and steam) for the year prior to project start and the following year were provided by the Nation for each site. The Weidt Group and project team visited each site to log HVAC system type, equipment, controls, and overall condition; and lighting fixtures and controls; as well as to interview building staff to understand equipment operation, operating hours, use, type of space, and maintenance and/or comfort issues encountered by staff and/or occupants.

The Weidt Group entered energy usage data and other building characteristics into B3 Benchmarking, the firm's proprietary energy analysis tool, which compared actual energy usage from Nation buildings to ideal performance standards from simulated buildings of similar size, use, and location. Summaries for each site, as well as a list of sites ranked by potential for energy savings (as compared to the corresponding benchmark), were provided to the Nation by the consultant in a Benchmarking Report.

- **Energy Audit.** Using data collected for the benchmarking analysis, The Weidt Group identified areas where energy efficiency could be improved and specified measures that could be implemented at each site to address those areas. These included activities like retrofitting of interior and exterior lighting with LEDs, remotely managing HVAC systems, and replacement of HVAC systems. In their final Energy Master Plan report, The Weidt Group presented energy cost savings alongside implementation costs for each identified upgrade or change. Several measures were provided in spreadsheet format, allowing the Nation to quickly review and sort potential energy efficiency investments for each building by Savings to Investment Ratios (SIRs), simple payback numbers, and other relevant measures such as carbon dioxide savings, total cost savings, and maintenance savings.

Overall, the project was successfully accomplished as planned and in the timeframe expected. The objectives were met, ultimately giving the Nation a valuable guide to incorporating energy efficiency

measures into building operation and maintenance decisions. The Weidt Group not only provided suggested improvements for each site, but also recommended that the Nation:

- Prioritize projects by focusing on no-cost/low-cost measures, repeatable measures (those that apply to multiple sites), those with high SIRs, and buildings with the highest potential for savings.
- Develop guidelines for new construction and for tenants of leased spaces, which incorporate energy efficiency.
- Regularly train staff on use/maintenance of any newly installed technology, control of building automation systems, and energy efficiency best practices (e.g., thermostat setpoints).
- Institutionalize certain measures (e.g., thermostat setpoints, power settings in the off-season) into general operation and maintenance practices of Nation-owned buildings.

The Nation is currently considering and determining next steps based on the detailed measures from The Weidt Group, as well as the long-term actions that incorporate energy efficiency into everyday activities.

## **Project Overview**

The Oneida Indian Nation (“Nation”) recognizes the need to be a responsible steward of its resources—including energy resources—while encouraging economic development to support the needs of its operations, programs, and members. In order to better serve these needs, the Nation sought and received a US Department of Energy (DOE) Tribal Energy Program Grant in 2017, focused on development of a master plan for energy efficiency, encompassing Nation-owned facilities. Through the recently completed Oneida Indian Nation *Energy Master Planning Project*, the Nation engaged and collaborated with The Weidt Group, an experienced building energy consultant, to provide a comprehensive analysis of energy consumption across Nation facilities and lands, and ultimately developed a master plan to guide decision-making regarding implementation of energy efficiency measures.

## **Objectives**

The **goal** of the project was to conduct a baseline energy analysis of Nation properties and facilities in order to meet the **objectives** of: (1) establishing a system for setting energy efficiency improvement goals; (2) developing an evaluation tool to assist with future comparison of energy usage; and (3) providing a comprehensive analysis of energy consumption to enable the development of a plan that will result in less use of energy, increase energy efficiency in tribal buildings, and increase available funding to meet the Nation’s economic and environmental priorities.

The objectives were met by: (1) performing a baseline energy analysis and audit of Nation properties and facilities; (2) identifying opportunities for energy savings; (3) establishing a system for meeting energy efficiency improvement goals; and (4) developing an evaluation tool to assist with future comparison of energy usage.

The measurable **outcomes** included: (1) all reasonable measures, including capital improvements, that would, if implemented, reduce energy use and/or the cost of operating the building; (2) for each measure, the associated annual energy savings, the cost to implement, and the simple payback, calculated by a method determined by the department; (3) a break-down of energy usage by system and predicted energy savings by system after implementation of the proposed measures; and (4) a general assessment of how the major energy-consuming equipment and systems used within spaces impact the energy consumption of the base building systems, based on a representative sample of spaces.

## **Description of Activities Performed**

All planned tasks for the project were completed on or close to the scheduled timeframe, described in detail in the following section. See also the Task Schedule set forth on page 13.

### **Task 1.0 Project Start-Up**

*Sub-Task 1.1: Work plan & budget review by key project staff and DOE*

*Sub-Task 1.2: Finalize contract with energy consultant; Milestone 1.2*

*Sub-Task 1.3: Kick-off meeting with energy consultant; Milestone 1.3*

*Sub-Task 1.4: Define boundaries for the study (facilities/buildings, systems, space types that will be included or excluded from the study); Milestone 1.4*

*Sub-Task 1.5: Define the baseline year (typically most recent 12 months) to compare to benchmarks and develop a basis for energy, cost, and emissions savings; Milestone 1.5*

The contract to perform the energy audit, consisting of a benchmarking analysis and audit, was finalized with The Weidt Group at the start of the grant. This project was specified to adhere to the American

Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Level II energy audit standard, which requires a walk-through analysis of buildings, as well as an energy survey and analysis. ASHRAE Level II further stipulates that reports showing low-cost/no-cost measures, potential improvements, and detailed energy and financial analysis must be generated. A kick-off meeting took place in October 2017 with Nation staff, including the Project Director, Project Manager, Nation Director of Facilities, and the Technical Contact, and The Weidt Group to review the project. The consultant also demonstrated its proprietary tool, *B3 Benchmarking*, which was used for the benchmarking analysis (see Task 3.0).

The Nation and the consultant defined the physical boundaries for the project, which consisted of 40 Nation-owned facilities (see table below). Facilities included in the project vary in size, ranging from the Turning Stone Casino Resort campus, at over 3 million square feet, to small office buildings, at less than 2,500 square feet. Site usage also differs, and includes entertainment venues, convenience stores, police department facilities, museum and educational sites, and maintenance/warehouse buildings.

#### **Nation-Owned Buildings Included in Analysis**

<b>Building</b>	<b>Square Footage</b>	<b>Use</b>
Turning Stone Casino Resort	3,420,311	Casino Campus
Inn at Turning Stone	30,000	Hotel
Turning Stone Warehouse	22,000	Storage
Oneida Lake Mart	13,000	Convenience Store
SavOn Verona	9,400	Convenience Store
SavOn Diesel <sup>1</sup>	1,900	Convenience Store
SavOn Turning Stone	5,000	Convenience Store
SavOn Lenox	3,000	Convenience Store
SavOn Oneida Plaza Mart	3,500	Convenience Store
SavOn Oneida Mart	1,800	Convenience Store
Commissary	3,900	Convenience Store
SavOn Canastota	5,500	Convenience Store
SavOn Smoke Shop	2,700	Convenience Store
SavOn Chittenango	2,900	Convenience Store
Car Care Center	9,000	Auto Repair
Oneida Indian Nation Police Headquarters	13,609	Police HQ
Oneida Indian Nation Police Substation	1,000	Police Annex
Ray Elm Children and Elders Center	70,000	Kitchen/Recreation/Office
Cultural Center	4,421	Education/Museum
Member Benefits office	2,400	Office
Annex offices	19,000	Offices/Print Shop
Atunyote Clubhouse	30,700	Clubhouse
White Pines Housing Office	3,200	Office
Marshall Houseman	15,700	Maintenance
Heritage Center	26,000	Museum
Dream Catcher Plaza	100,130	Offices and Health Clinic
Nation Recovery Warehouse	55,000	Archives, Storage
Yellow Brick Road Casino	68,000	Casino
4D Productions	4,500	Video Production House
Telecom Building	8,000	Block Building
Snug Harbor Maintenance Shop	3,400	Maintenance

Courthouse	5,800	Court facility
Cook House	5,000	Cultural building
Language Building	10,600	Education
Rec Center/Gym	17,300	Recreational facility
Territory Road	-	
Facility offices	4,700	Offices
Former Cube D Building	14,000	
Oneida Wholesale Warehouse	10,000	Storage
Heavy Equipment	4,100	

<sup>1</sup>This facility was decommissioned after the site visit, so was not included in the analysis.

The baseline year for the benchmarking study was determined to be the most recent full year with available utility data, defined as October 1, 2016 to September 30, 2017.

### **Task 2.0 Data Collection**

*Sub-Task 2.1: Collection of 3 years of utility data (12 months minimum), to include utility bills and/or sub-meters as available in spreadsheet format for electricity, natural gas, fuel deliveries, etc.; Milestone 2.1*

*Sub-Task 2.2: Collection of facility/building information, including primary building type, hours of operation, breakout of space types; Milestone 2.2*

The Weidt Group conducted data collection activities in late 2017/early 2018, consisting of a review of Nation utility data and site surveys to catalog building characteristics. Over the course of the project, the Nation provided the consultant with 24 consecutive months of data (including the baseline year), which included electricity, natural gas, liquefied petroleum gas (LPG), and steam usage.

Buildings within the defined boundaries were inspected by The Weidt Group to gather information on various characteristics useful for the study. On-site assessments allowed the group to log each building's HVAC system type, equipment, controls, and overall condition; and lighting fixtures and controls. The group interviewed building staff to understand equipment operation, operating hours, use, and type of space, as well as maintenance issues encountered by staff and/or comfort issues reported by occupants.

### **Task 3.0 Benchmarking Analysis**

*Sub-Task 3.1: Benchmark the data collected in Task 2.0 using vendor proprietary benchmarking system*

*Sub-Task 3.2: Deliver Benchmark Report for Nation review; Milestone 3.2*

*Sub-Task 3.3: Stack rank the facilities/buildings with the most potential*

*Sub-Task 3.4: Meet with energy consultant to review the Benchmark Report, review of the benchmarking tool, discuss specific findings as a result of the benchmarking analysis, and finalize a ranking of the facilities/buildings that provide the most potential for savings; Milestone 3.4*

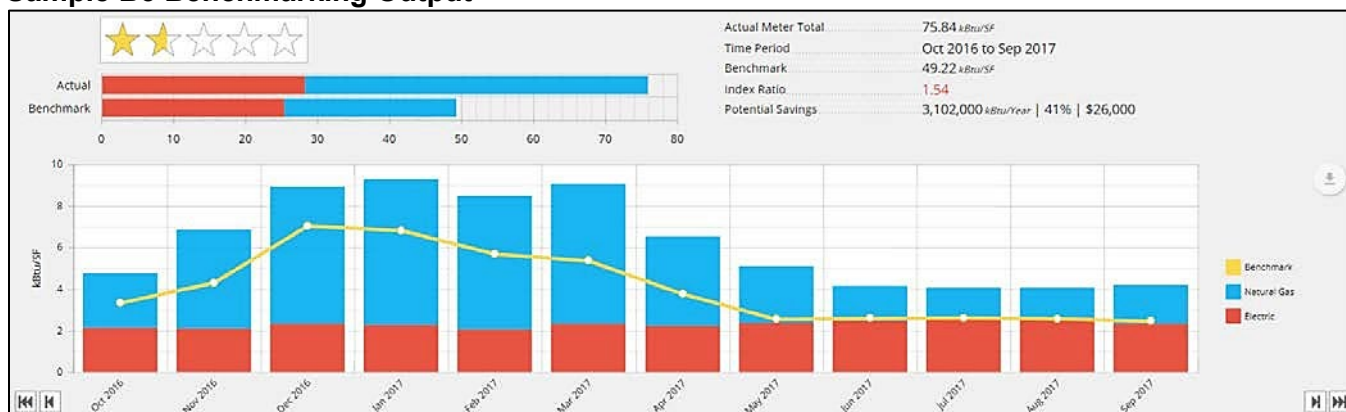
*Sub-Task 3.5: Develop an audit action plan for the facilities/buildings; Milestone 3.5*

The purpose of the benchmarking analysis was to compare the buildings in terms of energy usage and to ultimately identify potential energy savings for the Nation. To accomplish this, The Weidt Group entered energy usage and other building characteristics into B3 Benchmarking, the firm's proprietary analysis tool. For any data not available (e.g., an incomplete billing history), the consultant derived estimates from baseline information and observations from on-site assessments. The software compared actual energy usage from Nation buildings to ideal performance standards from simulated buildings of similar size, use, and location. An Energy Usage Intensity (EUI) figure was calculated for each building, which combines and standardizes utility data (electricity, natural gas, steam) into a single metric, making a

straightforward comparison to the benchmark EUI possible. From this comparison, the difference between actual and ideal usage allowed for identification of the facilities with the most potential for energy savings.

The benchmarking analysis was completed in mid-2018. For each facility, a utility summary was generated that showed usage for natural gas and electricity compared to the benchmark in graph and table format (see the following example). This demonstrated how the building performed over the past year in relation to the benchmark. In the example below, the greatest potential for energy and cost savings is associated with natural gas usage (in blue), as it was substantially higher than the benchmark usage (denoted by the yellow line in the chart).

### Sample B3 Benchmarking Output



Source	EUI (kBtu/SF)	
	Actual	Benchmark
Electricity	28.2	25.3
Natural Gas	47.6	23.9
<b>Total</b>	<b>75.8</b>	<b>49.2</b>

The Weidt Group provided the Nation with a list of the buildings ranked by potential for energy savings, in terms of dollars, as part of the Benchmarking Report. In summary, the consultant found that 83% of the potential for savings were within 23% (seven) of the facilities, including Turning Stone Resort and Casino, the Ray Elm Children and Elders Center, Dream Catcher Plaza, and four of the SavOn convenience stores. The analysis further estimated energy end-use (how energy is used), which showed that most (>50%) energy usage on Nation properties is due to HVAC operation.

In May 2018, the consultant reviewed the benchmark analysis findings with Nation staff, including the Technical Contact, members of the Nation's Business Affairs department and the Directors of the Nation's Facilities Department and the Turning Stone Facilities Department. A plan for conducting a more in-depth energy audit was established soon after the review of benchmark findings.

As part of the deliverables of this project, The Weidt Group provided the Nation with a 1-year license for B3, which includes access to the software to perform ongoing analysis and user training.



#### **Task 4.0 Energy Audit**

*Sub-Task 4.1: Collection of data regarding each facility/building that is part of the audit plan, including site maps, current architectural, mechanical, and electrical drawings, small scale floor plans (8 ½" x 11") or fire escape plans, BAS trend data if available, previously identified energy efficiency measures, previously identified future capital improvements, noted comfort or service deficiencies, previous audits reports, and system descriptions for steam, condensate, cooling water, vents, and drains (and compressed air if required); Milestone 4.1*

*Sub-Task 4.2: Conduct audit field work for Level I and Level II audits consisting of site visits, data collection, equipment inventory, lighting survey, operation and maintenance survey, and assessment of equipment condition*

*Sub-Task 4.3: Complete draft audit report that includes documentation of existing conditions, existing equipment inventory, list of potential energy efficiency measures with description, energy savings, cost savings, implementation cost, and simple payback of each measure; Milestone 4.3*

*Sub-Task 4.4: Meet with energy consultant to review the draft audit report, discuss specific findings and energy saving measures*

*Sub-Task 4.5: Finalize audit report and energy action plan; Milestone 4.5*

A full energy audit was conducted by The Weidt Group on the 40 Nation facilities. Using data collected for the benchmarking analysis, which included utility data and various building usage and operational characteristics, the consultant identified areas where energy efficiency could be improved and determined measures that could be implemented to address those areas. Sixteen general measures were identified, applicable to various Nation-owned sites, which included activities like retrofitting of interior and exterior lighting with LEDs, remotely managing HVAC systems, and replacement of HVAC systems. The firm recommended a mix of these measures for each site, as they deemed appropriate.

The Weidt Group presented energy cost savings alongside implementation costs for each identified upgrade or change to improve energy efficiency. A Savings to Investment Ratio (SIR), which is an indicator of life cycle cost, was calculated for each measure across all properties, as well as for each property individually. The higher the SIR, the more cost efficient the change. They also shared simple payback estimates, indicating how long each measure would take to recoup implementation costs. This information was not only presented in a report, but provided in a spreadsheet format that allows the Nation to quickly review and sort potential energy efficiency investments for each building by SIR, simple payback numbers, and other relevant measures such as carbon dioxide savings, total cost savings, and maintenance savings. The analysis was also tied back to the benchmark analysis, showing how implementation of measures could bring the EUI closer to benchmark EUIs.

The consultant grouped suggested energy efficiency measures by SIR, indicating which would be no- or low-cost (Bundle 1), and those with SIRs >2.0 (Bundle 2), >1.5 (Bundle 3), and >1.0 (Bundle 4). While those with lower SIRs have longer payback periods and are more costly to implement, the consultant described ways in which the Nation could use savings generated from implementation of Bundles 1 and 2 to help fund Bundles 3 and 4.

Examples of suggested measures and their associated metrics include:

- *No-cost/Low-cost:* Lowering thermostat setpoints at the Marshall Houseman building would result in \$340 in annual cost savings, 479 therms of annual natural gas savings; would cost \$72; and has a simple payback of 0.2 years.

- *SIR >2.0*: Exterior lighting LED retrofit at the Inn at Turning Stone would result in \$3,278 in annual cost savings, 17,827 kWh in annual electricity savings; would cost \$5,346; and has a simple payback of 1.6 years.
- *SIR >1.5*: Replacing refrigeration condensing units at one SavOn convenience store would result in \$5,732 in annual cost savings, 29 MMBtu in annual energy savings; would cost \$20,481; and has a simple payback of 3.6 years.
- *SIR >1.0*: Upgrading the hot water pump at the Ray Elm Children and Elder Center would result in \$1,104 in annual cost savings, 11,998 kWh in annual electricity savings; would cost \$9,785; and has a simple payback of 8.9 years.

Energy audit reporting was provided to the Nation by building, with similar buildings combined (e.g., all convenience stores were covered within one report). A comprehensive final report was provided to the Nation in the final quarter of the grant period, entitled *Energy Master Plan*. The Weidt Group presented the findings detailed in this report to the Nation project team in September 2018.

The internal project team met with and presented the reports and summaries to the Nation's Chief Operating Officer in October 2018. Based on guidance obtained in this meeting, the Nation prioritized recommendations and actions resulting from the final reports and determined how to proceed with various energy efficiency measures (i.e., whether to obtain grant funding, use tribal funds, or hold-off on certain measures). Finally, the Nation presented the project at the annual grantee meeting in Denver, Colorado in December 2018.

#### **Task 5.0 Project Monitoring and Reporting**

*Sub-Task 5.1: Conduct regularly scheduled project meetings/calls with key staff*

*Sub-Task 5.2: Submit project updates to Nation Leadership as requested*

*Sub-Task 5.3: Submit quarterly progress reports to DOE and quarterly financial reports to Payment Management System (PMS)*

*Sub-Task 5.4: Consultant to submit regular reports to Project Manager*

*Sub-Task 5.5: Submit final project report to Nation Leadership; Milestone 5.5*

Monitoring and reporting for this project were conducted as intended. Project meetings with the full internal team (Project Director, Project Manager, Nation Director of Facilities, and Turning Stone Director of Facilities) occurred monthly. Updates were provided to Nation Leadership as needed, including in weekly grant executive reports. The team also submitted quarterly reports to DOE, as required. The consultant delivered its reports as planned, allowing the project team to submit a final report and presentation to the Nation in October 2018.

#### **Conclusions and Recommendations**

In collaboration with The Weidt Group, the Nation was able to successfully accomplish the goal of this project, effectively completing a comprehensive energy analysis of all Nation facilities. The three objectives were met and have provided the Nation a basis from which to make decisions regarding future energy efficiency improvements and investments.

*Objective 1: Establish a system for setting energy efficiency improvement goals.* The energy audit provided to the Nation by The Weidt Group included detailed spreadsheets for each building that can be easily sorted by relevant information, such as location, SIR, simple payback, and cost/energy savings, which aids in the identification of feasible measures and prioritization of implementation. This should

allow the Nation to identify goals and priorities and make informed decisions on implementation in the future.

*Objective 2: Develop an evaluation tool to assist with future comparison of energy usage.* Using the B3 Benchmarking software and other collected data, The Weidt Group provided the Nation with a foundation of energy usage data that can inform decision-making on upgrades and improvements to energy-related equipment and projects. Inputs can be adjusted as new data become available, and comparison to the benchmarks used can be further refined to make the most informed comparisons possible. The software has proven to be useful in many ways, including in the identification of utility billing errors that may have otherwise been missed.

*Objective 3: Provide a comprehensive analysis of energy consumption to enable the development of a plan that will result in less use of energy, increase energy efficiency in tribal buildings, and increase available funding to meet the Nation's economic and environmental priorities.* The Energy Master Plan developed by The Weidt Group detailed energy consumption at all Nation-owned buildings, and included several recommendations for increasing overall energy efficiency that would result in cost-savings as well as sustained energy savings.

Based on this energy audit, The Weidt Group suggested that the Nation first focus on no-cost/low-cost measures, intended to allow the Nation to make quick and relatively simple improvements. Following that, they recommended implementing repeatable measures—those that can be carried out across multiple sites—which could save on contractor and labor costs, as well as materials when ordering in bulk. Once those projects are complete, they believed that the Nation could then focus on measures with high SIR, as well as buildings with the highest potential for savings. Implementing measures purposefully and incrementally could allow the Nation to use cost-savings from initial, low-cost improvements to help fund more costly investments in the future.

Beyond specific measures for each Nation-owned building, The Weidt Group recommended actions that are likely to ensure the Nation continually incorporates energy efficiency measures into its planning and decision-making. These include applying measures to future planning of new construction, existing leasable space, future real estate purchases, and vacant buildings. They recommended creating guidelines regarding energy efficiency for new construction, to ensure all new structures are designed with energy efficiency in mind. Guidelines could also be established for tenants of leased spaces, providing specific standards for activities like thermostat temperature and timer settings, and appliance settings and maintenance.

Across all sites, staff training was also recommended, including in the use/maintenance of any newly installed technology, control of building automation systems, and energy efficiency best practices (e.g., thermostat setpoints). Training for facilities and any other staff responsible for the operation and maintenance of equipment would be a necessity; however, any staff involved in the daily use of equipment or environmental controls should receive guidance as well.

Finally, The Weidt Group recommended institutionalizing certain measures into general operation and maintenance practices of Nation-owned buildings. These include short-term changes, such as establishing thermostat setpoints based on intended use, and longer-term solutions, like adjusting equipment to lower power settings when not in use for an extended period of time (e.g., in the off-season).

The Nation is currently considering and determining next steps based on the detailed measures from The Weidt Group, as well as the long-term actions that incorporate energy efficiency into everyday activities.

### **Lessons Learned**

While the Nation was successful in meeting its goal and objectives for this grant, there were a few challenges encountered that will be taken into consideration for further work in this area, mainly related to data collection and site visits.

It was found that arranging site visits with the project team, The Weidt Group, and a building facilities representative could be a challenge, as there were numerous buildings to inspect, located throughout a large area, and schedules were often difficult to coordinate. Having a member of the building facilities team at each site visit was crucial, however, in order to answer the consultants' detailed questions regarding building operation and maintenance. Despite the difficulties of coordination, the team was able to visit and collect data from the 40 sites within the expected time frame. This is partially due to effective communication between the project team and building facilities representatives, who understood the purpose and importance of the energy audit and were therefore eager to accommodate the group whenever possible.

Not only was it important for a building facilities representative to be present to answer questions on-site, the internal project team found that it was equally critical to educate the consultant on the operations and usage of each building prior to site visits and during the reporting and recommendations phase. It provided valuable context for The Weidt Group, who were able to tailor the analysis and recommendations to fit each building's specific situation.

In terms of data collection, it proved to be time-consuming to benchmark and report on various facilities other than the Turning Stone Resort Campus, due to differing building types and disparate locations. Utility data was also not available for some sites, as they were combined with other sites, making separation of information challenging. Some locations had multi metered systems, making delineation of data time-consuming as well. To address these issues, the consultant used their understanding of each location's operation and use, as well as their extensive knowledge of similar buildings, to estimate missing utility data, and were able to carry out the full analysis.

Consideration of the time of year on-site data is collected was also found to be important, as it can have an impact on the level of detail gathered. For example, because the bulk of the site visits were conducted in colder months, the consultant was able to use thermal imaging to conduct heat loss analyses, which would have been more difficult in warmer months. Time of day was also important, as the direction of the sun could obstruct thermal imaging; however, each site varied in the ideal time, based on physical location and structure type. These analyses provided additional information about the sites that give the Nation more robust detail than expected, which only helps in future decision-making.

## Task Schedule

Task Number Per Statement of Work	Title or Brief Task Description	Task Completion Date				Progress Notes
		Original Planned	Revised Planned	Actual	Percent Complete	
1	Finalize contract with energy consultant	Oct 17		Oct 17	100%	Completed
1	Kick-off meeting with Consultant	Nov 17		Oct 17	100%	Completed
1	Define boundaries for the review	Nov 17		Nov 17	100%	Completed
1	Baseline year or years identified	Nov 17		Nov 17	100%	Completed
2	Utility data from utility bills and/or sub-meters as available gathered	Dec 17	Jan 18	Jan 18	100%	Completed
2	Facility/Building information gathered	Dec 17	Jan 18	Feb 18	100%	Completed
3	Delivery draft benchmark report	Mar 18	Apr 18	Apr 18	100%	Completed
3	Interactive review of report completed	Apr 18		May 18	100%	Completed
3	Develop audit action plan	May 18		May 18	100%	Completed
4	Collection of facility data for audit action plan	Aug 18		Jun 18	100%	Completed
4	Audit draft report completed	Nov 18		Sep 18	100%	Completed
4	Final audit and energy action report completed	Nov 18		Nov 18	100%	Completed
5	Final Report	Nov 18		Nov 18	100%	Completed