Exhibit A-1: SCOPE OF WORK – Paul Smith's College

L&S Energy Services, Inc., "the Applicant", is applying to perform work at Paul Smith's College under the NYSERDA REV Campus Challenge Technical Assistance for Roadmaps Program PON 3438. L&S has extensive experience working with colleges and universities to improve their energy efficiency. L&S will assist Paul Smith's College in understanding their energy use and identifying cost effective energy efficiency improvements and integrate those improvements into the college's overall sustainability and growth plans.

Overview

Paul Smith's College (PSC) is a small, private, four-year undergraduate college within the bounds of Upstate New York's 6 million-acre Adirondack Park. The student population is approximately 800, the majority of who reside on campus 9 months of the year. The faculty and staff population is approximately 90 during the normal school year. The employee population expands to over 150 during the summer season due to the Adirondack Watershed Institute, a research institute located on campus that employs students to do work monitoring invasive species in our local watershed.

The main campus is comprised 61 buildings totaling 574,775 sq/ft of building space. The main campus includes 3 Academic Buildings, 15 Residence Halls, 2 Administration Buildings, Athletic Center, Student Center and Library. The main campus also includes the Paul Smith's College VIC, a nature center which is open to the public. The VIC consists of 1 main building and over 30 acres of trails with are available for public use. In total the college owns over 14,200 acres, the majority of this is FSC (Forest Stewardship Council) Certified managed forestland. See below for complete list of campus buildings.

Building Type: Building					
Alumni Hall	BUILDING_ID_04224	1995	24	RESIDENTIAL FACILITIES	6,536
Blum House	BUILDING_ID_04253	1892	127	RESIDENTIAL FACILITIES	4,464
Buxton Annex	BUILDING_ID_04171	1953	66	ATHLETIC FACILITIES	20,304
Campus Safety	BUILDING_ID_04173	1962	57	SPECIAL-USE FACILITIES	754
Cantwell Hall	BUILDING_ID_04255	1961	58	ACADEMIC FACILITIES	20,902
Clinton Hall	BUILDING_ID_04256	1953	66	RESIDENTIAL FACILITIES	7,404
Currier Hall	BUILDING_ID_04269	1965	54	RESIDENTIAL FACILITIES	19,529
Essex Hall	BUILDING_ID_04250	1979	40	RESIDENTIAL FACILITIES	6,300
Facilities	BUILDING_ID_04225	1964	55	SUPPORTING FACILITIES	15,045
Faculty #1	BUILDING_ID_04241	1959	60	RESIDENTIAL FACILITIES	1,400
Faculty #2	BUILDING_ID_04242	1959	60	RESIDENTIAL FACILITIES	1,400
Faculty #3	BUILDING_ID_04243	1960	59	RESIDENTIAL FACILITIES	2,000
Faculty #4	BUILDING_ID_04244	1962	57	RESIDENTIAL FACILITIES	2,100
Faculty #5 w/Garage	BUILDING_ID_04245	1962	57	RESIDENTIAL FACILITIES	2,000
Faculty #6	BUILDING_ID_04246	1963	56	RESIDENTIAL FACILITIES	2,000
Faculty #7	BUILDING_ID_04247	1964	55	RESIDENTIAL FACILITIES	3,776
Forestry Club Cabin	BUILDING_ID_04231	1973	46	GENERAL-USE FACILITIES	4,646
Franklin Hall	BUILDING_ID_04251	1979	40	RESIDENTIAL FACILITIES	6,300
Freer Hall	BUILDING_ID_04257	1972	47	ACADEMIC FACILITIES	39,133
General Campus	BUILDING_ID_04327	1946	73	GENERAL-USE FACILITIES	1
Glover Cottage	BUILDING_ID_04248	1890	129	RESIDENTIAL FACILITIES	4,500
Greenhouse	BUILDING_ID_04228	1992	27	SPECIAL-USE FACILITIES	1,000
Hillside Hall	BUILDING_ID_04252	1959	60	RESIDENTIAL FACILITIES	11,052
Horse Barn	BUILDING_ID_04266	1966	53	SPECIAL-USE FACILITIES	2,000
Inner Sanctum - Storage Building	BUILDING_ID_04267	1895	124	GENERAL-USE FACILITIES	2,000
Joan Weill Adirondack Library	BUILDING_ID_04270	2002	17	STUDY-LIBRARY FACILITIE	43,400
Joan Weill Student Center	BUILDING_ID_04235	2006	13	SPECIAL-USE FACILITIES	48,500
Lakeside Hall	BUILDING_ID_04232	1960	59	RESIDENTIAL FACILITIES	10,125
Lambert Hall	BUILDING_ID_04260	1895	124	RESIDENTIAL FACILITIES	3,567
Livermore Hall	BUILDING_ID_04261	1964	55	RESIDENTIAL FACILITIES	21,694
Lower St. Regis Hall	BUILDING_ID_05370	2008	11	RESIDENTIAL FACILITIES	17,500
Lydia Martin Smith Hall	BUILDING_ID_04233	1968	51	RESIDENTIAL FACILITIES	24,888
McNaughton Cottage	BUILDING_ID_04249	1893	126	RESIDENTIAL FACILITIES	4,200
Overlook	BUILDING_ID_09263	2012	7	RESIDENTIAL FACILITIES	35,420
Paolozzi Env Sci and Edu Center	BUILDING_ID_04258	2009	10	RESIDENTIAL FACILITIES	5,796
Phelps Smith Administration Building	BUILDING_ID_04170	1967	52	OFFICE FACILITIES	16,212
Pickett Hall	BUILDING_ID_04234	1968	51	ACADEMIC FACILITIES	19,600
Pole Barn	BUILDING_ID_0000	2010	9	SPECIAL-USE FACILITIES	7,378
Post Office Building	BUILDING_ID_04263	1962	57	SUPPORTING FACILITIES	864
Saratoga Hall	BUILDING_ID_04268	1968	51	RESIDENTIAL FACILITIES	27,606
Saunders Gymnasium	BUILDING_ID_04172	1975	44	ATHLETIC FACILITIES	50,340
Sawmill	BUILDING_ID_04229	1985	34	SPECIAL-USE FACILITIES	4,069
Sporck Admissions Center	BUILDING_ID_04259	1998	21	OFFICE FACILITIES	5,000
Stage Coach Building	BUILDING_ID_04262	1990	29	SPECIAL-USE FACILITIES	864
Sugarbush	BUILDING_ID_04264	1985	34	SPECIAL-USE FACILITIES	890
Upper St. Regis Hall	BUILDING_ID_05371	2008	11	RESIDENTIAL FACILITIES	17,500
VIC	BUILDING_ID_09029	1986	33	SPECIAL-USE FACILITIES	20,500
Waste Treatment Plant	BUILDING_ID_09028	1965	54	SUPPORTING FACILITIES	2,046
Water System Pumphouse	BUILDING_ID_04265	1918	101	SUPPORTING FACILITIES	270
				Subtotal for Building	**574,775**

Paul Smith's College (PSC) main campus energy resources include electricity, propane and fuel oil. In 2018 the campus used 3,792,535 kwh of electricity from National Grid, 35,027.4 gallons of propane, and 19,346.5 gallons of fuel oil. Wood pellets were used in 2018, but total purchased amounts have yet to be collected and reported for 2018. Electricity use is partially offset by a photovoltaic system.

The campus is operating under a 2007/08 energy use baseline, and 2017/18 has 24% lower energy use/sf than the baseline. The current EUI is 70 MBtu/sf site and 120 MBtu/sf source. It's been 10 years since their last energy audit and Climate Action Plan. An updated campus energy audit, prioritized list of energy efficiency upgrades, evaluation of additional renewable energy options and updated Climate Action Plan are due.

Section 1: Description of existing clean energy goals and progress - Commitment to Clean Energy

Paul Smith's College is currently operating under a Sustainability Plan and the REV Campus Challenge aligns with that plan in regard to the campus' commitment to clean energy, engagement in energy efficiency opportunities, and investigation of the potential for on-campus renewable energy projects. The College's mission is "To develop career-ready graduates through hands-on, personalized education. To educate, research and advocate on issues that improve our planet and the lives of the people that inhabit it." (Paul Smith's College) In support of this mission, the college has a long history environmental stewardship and sustainable development. In 2007 PSC became a founding signatory for the American Colleges and Universities Presidents Climate Commitment. In 2009 the college developed a Climate Action Plan with a proposed carbon neutrality date of 2029. In the spring of 2019, the college completed its first Sustainability Tracking and Rating System report and is currently a STARS certified Bronze Institution. PSC is currently working on its 2018/2019 STARS report and is aiming for a STARS Silver Certification for 2018/19 and Gold for 2019/20.

In accordance with the directives in the 2009 Climate Action Plan the college contracted with Johnson Controls to conduct a campus-wide energy audit and implemented over 2 million dollars in energy efficiency upgrades. In the last ten years the college has hired a Sustainability Coordinator, Katherine Glenn, and established an active Center for Sustainability in the Student Center with student employees implementing various campus programs and outreach activities. The college manages a small Sustainability Grant Program and averages about 22k a year in funded projects which support sustainability objectives.

The college has completed two renewable energy projects in the last decade and two LEED Certified Sliver buildings have been completed. In 2012 the college installed a small 12.24 kw grid-tied solar array on the library roof. In 2014 the college installed a district wood pellet boiler to heat three academic buildings (which house the majority of faculty offices and classroom space). The pellet boiler was commissioned in the fall of 2018 and anticipates reporting its first impactful greenhouse gas reduction on their 2018/2019 ghg report.

Work under the REV Campus Challenge Technical Assistance for Roadmaps Program will focus on energy efficiency, evaluation of renewable energy options, an update of the college Climate Action Plan and establishment of an updated carbon neutrality goal. The bonus funding will support 3 student intern positions. The students will focus on Sustainable Transportation, Sustainable Dining, and Waste Management projects as outlined in the STARS strategic plan.

Section 2: Goals of participation in this Program and summary of tasks to be completed.

The result of this work will include a multi-year plan for building efficiency and operations, in support of PSC's Strategic Plan and Sustainability Plan. This plan will establish goals to:

- Set multi-year targets
- Reduce greenhouse gas emissions
- Establish systems to benchmark and track energy use
- Improve energy efficiency
- Ensure energy efficiency gains are maintained over time
- Increase use of green energy
- Promote sustainable local farming and land-use initiatives

Section 3: Task-by-task description of services and deliverables to be provided.

Task 1 – *Preliminary Energy Analysis and Benchmarking*

Task 1.1 – Meetings – Meetings will be held with PSC to refine goals, ensure work is supportive of facility goals and within policy and financial constraints, establish economic criteria and report on progress.

Deliverables – Meeting notes and other records as deemed appropriate.

Task 1.2 – Utility Analysis –Utility data shall be gathered for 2018/19 and combined with existing data for 2017/18 to establish a two year period for benchmarking. The campus has established 2007/08 as the baseline period and that period shall be used in evaluating the data.

Deliverables – Current performance as compared to baseline year and long-term goals.

Task 1.3 - Benchmarking – The two years of utility data will be analyzed using Energy Star Portfolio Manager. The data will be compared to the data of other campuses using Portfolio Manager.

Deliverables – Energy Star Portfolio Manager Report and ranking for the facility.

Task 1.4 - GHG Assessment – L&S will work with Paul Smith's College to prepare the GHG emissions inventory for the previous two years, based upon emission source information and the USEPA and eGrid emissions factors.

Deliverables – Prepare GHG inventory.

Task 1 Deliverables – Benchmarking report based on existing metering, a sub-metering plan, and GHG report.

Task 2 – *Campus Energy Assessment*

Task 2.1 – Conduct Walk-Through Survey - A field survey shall be scheduled to gather building data for the energy analyses to be performed. Architectural features, mechanical equipment, lighting, plumbing and controls shall be inventoried. Remaining useful life and estimated efficiency of equipment shall be documented. The existing energy management system shall be used to gather trend data on building performance characteristics.

Task 2.2 – Identify and Analyze Low Cost/No Cost Energy Efficiency Measures – Low cost/no cost measures can be implemented quickly. These usually consist of operational changes or maintenance items which can produce significant savings.

Task 2.3 – Identify and Analyze Capital Measures – Capital measures will be identified, analyzed and screened to ensure they are practical to implement. Cost estimates shall be based upon industry standard references like RS Means or vendor quotes. Analyses shall be performed using spreadsheets. Interactive effects between measures shall be considered. Measures may save energy and/or water. Alternate energy and combined heat and power systems will be considered.

Task 2.4 – Review Mechanical and Electrical Designs, Conditions and Operations and Maintenance (O&M) Practices – A review of the existing design, equipment inventory and remaining useful life and O&M practices shall be conducted. It is important to ensure that the report can be used to develop a long range plan for the facility.

Task 2 Deliverables – ASHRAE Level 2 Energy audit to include

- Summary of recommendations
- Summary of utility data and utility rate analysis
- Energy Usage Index (EUI, kBtu/square foot) comparison with similar sites, estimated savings if EUI targets are met, estimate of low cost/no cost savings
- Detailed breakdown of energy consumption by end use
- Individual building descriptions
- Equipment inventory by building
- Description of O&M and energy efficiency measures considered
- Energy analysis and measure interaction including capital cost and savings
- Financial analysis of energy efficiency measure
- Monitoring and verification methodology

Task 3 – *Develop Energy Master Plan and Update the Climate Action Plan* – The results of these activities shall be used to develop an Energy Master Plan that will provide long term guidance in achieving PSC's energy and sustainability goals. The Energy Master Plan will be consistent with the goals of the Climate Action Plan and provide detailed steps toward achieving portions of the plan. This process will begin with the results of the energy audit. As such;

Task 3.1 – Present Results of the Energy Audit – A meeting will be held with Paul Smith's College to present the report and discuss next steps.

Task 3.2 – Rank Energy Efficiency Opportunities – The Energy Efficiency Measures will be placed in a matrix and screened for implementation. They will fall within the facility's economic criteria, and be able to be implemented without disrupting operations. Some measures are not cost effective, but should be implemented at the end of the useful life of existing equipment. Other measures will be required to reduce the carbon footprint. Measures to be implemented will be integrated into the long-range sustainability and capital plans.

Task 3.3 – Develop Energy Master Plan – The Energy Master Plan is a long-term document that takes into account the multi-year goals of PSC, the service life of equipment and financial constraints.

Task 3.4 – Update Climate Action Plan – As deemed appropriate.

Task 3.5 – Sustainability Tracking, Assessment and Reporting System (STARS) Data and Reporting – STARS will be an excellent framework for tracking progress. A method will be developed to assemble, analyze and update the required data in an efficient fashion.

Task 3.6 – Identify Funding Opportunities – Assist with Grant Applications – Provide assistance to PSC to identify and apply for grants in support of implementing the Energy Master Plan and Climate Action Plan, including energy efficiency and green energy.

Task 3 Deliverables

- A matrix of proposed energy efficiency measures that are cost effective, with a timeline for implementation. These may include alternative energy and combined heat and power projects.
- Equipment upgrade projects and timeline to execution. These will likely be recommended for implementation at the end of useful life for the equipment.
- Integration plan for the building sub-metering and energy management system for ongoing tracking and commissioning.
- Evaluation of existing O&M plans and recommended improvements.
- Work with PSC to assemble and analyze data to report to the Association for the Advancement of Sustainability in Higher Education (AASHE) under the STARS Program.
- Help develop SOP for STARS reporting, to consist of an Energy Master Plan and an update to the Climate Action Plan. A Project Summary Sheet and Case Study shall also be prepared.
- The Energy Master Plan will build on the energy audit and consist of the following:

- Executive Summary

    - Summary of proposed actions
    - Projected project impacts
- Background
    - Overview
    - Project Goals
- Description of Facilities – By Building
    - Function and utilization
    - Construction and age
    - Equipment type and operation – daily and seasonally
    - Existing issues
- Preliminary Energy Analysis
    - Summary of utility use, cost and rates
    - Energy Star score and comparison to similar facilities
    - Comparison to campus baseline and goals
    - Sub-metering recommendations
- Campus Energy Assessment
    - Summary of building inventory of systems and equipment
    - Evaluation of building conditions
- Recommended Energy Efficiency Improvements
    - O&M Measures
    - Energy Conservation and Green Energy Measures
        - Description
        - Energy and Economic Analysis
- Implementation Plan
    - Multi-year implementation plan showing annual cash flow analysis
    - Sources of funding for energy efficiency improvements
    - Project Summary Sheet
    - Case Study
- Appendices
    - Utility energy data
    - Energy savings calculations
    - Itemized cost estimates
    - Equipment inventory
    - Environmental impact summary
    - Other supporting documentation as needed

Student Intern Involvement

The Applicant will utilize student interns to assist in the completion of the Roadmap. The consultant, L&S Energy Services, has committed to integrate the students into the project. This will provide an excellent hands-on learning opportunity. The student interns will submit a final report on participation in this project.

The Applicant will receive a $4,000 bonus to cover the cost of the student interns. The students will focus on Sustainable Transportation, Sustainable Dining, and Waste Management project as noted above.

Section 4: Estimated Schedule

		Weeks from Project Start																												
Task	**Title/Description**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Task 1	**Preliminary Energy Analysis and Benchmarking**																														
Task 1.1	Meetings																														
Task 1.2	Utility Analysis																														
Task 1.3	Benchmarking																														
Task 1.4	GHG Assessment																														
Task 2	**Rank Energy Efficiency Opportunities**																														
Task 2.1	Conduct Walk-Through Survey																														
Task 2.2	Identify and Analyze Low Cost/No Cost Operations																														
Task 2.3	Identify and Analyze Capital Measures																														
Task 2.4	Review M&E Design, Condition and O&M Practices																														
Task 2.5	Meet With Pail Smiths College to Review Recommendations																														
Task 3	**Rank Energy Efficiency Opportunities**																														
Task 3.1	Rank Energy Efficiency Opportunities																														
Task 4	**Develop Energy Master Plan / Update Sustainability Plan**																														
Task 4.1	Develop Energy Master Plan																														
Task 4.2	Update Sustainability Plan																														
Task 4.3	STARS Data and Reporting																														
Task 4.4	Identify Funding Opportunities - Grant Applications																														

Task	Title/Description	Labor category/rate/hours										
		Program Manager $175/hr	Senior Project Engineer $155/hr	Senior Energy Engineer $125/hr	Energy Engineer III $112/hr	Energy Engineer I $78/hr	Project Coordinator $65/hr	Intern, Other Expenses	NYSERDA % Cost Share	NYSERDA Cost Share	Institution Cost Share	Total Cost
Task 1	**Preliminary Energy Analysis and Benchmarking**											
Task 1.1	Meetings	8	12	12	12		8		100%	$6,624	$0	$6,624
Task 1.2	Utility Analysis	2		4	8		30		100%	$3,696	$0	$3,696
Task 1.3	Benchmarking	6		16	8	24	32		100%	$7,898	$0	$7,898
Task 1.4	GHG Assessment	2	4	8	12		8		75%	$2,876	$959	$3,834
Task 2	**Campus Energy Assessment**											
Task 2.1	Conduct Walk-Through Survey	2		16	24	48			50%	$4,391	$4,391	$8,782
Task 2.2	Identify Low Cost/No Cost Operations	2	4	8	16	12			50%	$2,349	$2,349	$4,698
Task 2.3	Identify Capital Measures	2	8	16	32	60			50%	$5,927	$5,927	$11,854
Task 2.4	Review M&E Design, Condition and O&M Practices	4		16					50%	$1,350	$1,350	$2,700
Task 2.5	Meet With Paul Smiths College to Review Recommendations	4		4					50%	$600	$600	$1,200
Task 3	**Rank Energy Efficiency Opportunities**											
Task 3.1	Rank Energy Efficiency Opportunities	2			8				50%	$623	$623	$1,246
Task 4	**Develop Energy Master Plan and Update the Sustainability Plan**											
Task 4.1	Develop Energy Master Plan	4		40			2		75%	$2,915	$2,915	$5,830
Task 4.2	Update Sustainability Plan	2	12	12	6				75%	$3,287	$1,096	$4,382
Task 4.3	STARS Data and Reporting		8	16	12	8	48		100%	$8,328	$0	$8,328
Task 4.4	Identify Funding Opportunities - Grant Applications	4	8				8		50%	$1,230	$1,230	$2,460
Student Intern								$4,000	100%	$4,000	$0	$4,000
Expenses (misc and travel)								$3,000	50%	$1,500	$1,500	$3,000
PROJECT TOTAL		44	56	168	138	152	136	$7,000		**$57,593**	**$22,939**	**$80,532**