

STATE OF NEW HAMPSHIRE, DEPARTMENT OF
ADMINISTRATIVE SERVICES

2019 STATEWIDE ENERGY CONSERVATION PLAN

RSA 21-I:14-C



Statewide Energy Conservation Plan

RSA 21-I:14-C

JANUARY 15, 2020

In accordance with Revised Statutes Annotated (RSA) 21-I:14-c, Energy Consumption Reduction Goal; Reports: Each state department must implement cost-effective measures to reduce fossil fuel consumption by 30 percent by 2020 in state buildings, on a square-foot basis as compared to a 2005 baseline. Each state department must submit an annual report to the Department of Administrative Services (DAS) detailing all efficiency measures completed in state-owned buildings within the year as well as potential measures identified to help achieve the energy consumption reduction goals established by RSA 21-I:14-c. DAS is required to compile all departmental conservation plans, summarize and report on the State's progress toward reaching its fossil fuel reduction goals, and identify barriers that may prevent the state from achieving these goals. This document is submitted to fulfill DAS's reporting obligation. The State of New Hampshire Fiscal Year 2019 Annual Energy Report provides a summary of the State's progress over the last year, and is included as *Appendix C* to this report.

State Agency Energy Conservation Plans

Individual agency reports have been received from fifteen of the sixteen large property-owning agencies and institutions (see *Appendix A*). The Department of Corrections was the only property-owning agency that did not submit an agency energy conservation plan for 2019. All plans received were reviewed by DAS State Energy Management Office staff. Collectively, agencies have identified and proposed an estimated \$28 million¹ worth of energy efficiency measures to be completed in their efforts to achieve fossil fuel reduction goals for 2020 in state owned facilities.

Departments listed 68 energy conservation measures completed in FY19. The total cost of completing these 68 measures was nearly \$1.7 million resulting in nearly \$255,000 in annual avoided energy costs and a simple payback of 7 years. Many of these measures will remain in state facilities for fifteen years or more, providing long-term energy savings and avoided energy costs for the state.

Non-property owning agencies were asked to complete a simplified plan consisting of a one-page summary of efforts they have made over the past year to reduce energy consumption along with reduction goals for the upcoming year. Eleven non property-owning agencies were required to submit plans based on the criteria listed in Executive Order 2016-03: agencies that occupy more than 5,000 square feet and those that employ at least 15 people. Six out of eleven non property-owning agencies met their obligation of submitting a completed Energy Conservation Plan for FY19. Two main ideas remain consistent throughout non-property-owning agency plans from year to year. First, as tenants in their buildings, non-property-owning agencies see themselves as having limited control over energy efficient capital improvements to the building(s) they occupy. Secondly,

¹ Costs of energy efficiency measures provided by agencies are estimated costs and savings and does not include new construction projects.

these agencies report that they encourage employee behavior-change to reduce energy consumption, however they wish there was more they could do to help meet the State's fossil fuel reduction goals. All ideas presented in non-property owners' plans will be passed along to the department that owns the building for review and possible implementation. In fact, as a direct response to a FY18 non-property owning agency conservation plan suggestion, DAS implemented a large LED lighting system upgrade to the state facility leased by that agency. See *Appendix B* for a list of departments that do not own property and submitted an energy conservation plan for FY19.

FY19 Energy Efficiency Projects

The State Energy Management (SEM) Office was awarded a total of \$500,000 in capital funds to implement energy efficiency projects in the fiscal biennium 2018/2019. The State Energy Manager and staff equitably allocated the funds for efficiency projects across all property-owning departments based on the square footage of building space that each agency owns. Collectively, the state owns and operates over 700 facilities, all of which provide opportunities for energy improvements. At the closing of the fiscal biennium, the full \$500,000 had been expensed on 30 individual energy efficiency projects across 15 agencies (see *Table 1:SEM Capital Funded Project Summary FY18/19*). In total, these projects resulted in a projected annual savings of \$122,000 in avoided energy costs and a 4.1 year simple return on investment. Based on a conservative average effective lifespan of 15 years, these 30 completed energy efficiency projects will save the state nearly \$1.8 million in avoided energy costs over their expected lifetimes (at current energy rates). In FY19, the State was engaged in two energy saving performance contracts (ESPC). ESPC one (I) includes twenty-eight (28) buildings located in downtown Concord and on the State Office Park South. ESPC two (II) includes twenty-one (21) buildings in the Seacoast region belonging to five individual agencies (Department of Administrative Services, Employment Security, Fish & Game Department, Department of Natural & Cultural Resources, and the Department of Transportation). ESPCs are a way for agencies to implement large scale energy saving measures in their buildings with no up-front capital expenditures. Agencies pay for the project over time from the guaranteed energy savings associated with the energy improvements using their utility budgets. Departments see no difference in their total expenditures because the ESPC contract payments are offset by reduced energy bills. Construction of ESPC I commenced in FY19 and ESPC II will start construction in FY20.

SEM Staff worked with the US Department of Energy in 2016 to complete an ESPC Champions Toolkit. This toolkit aims to provide agencies with guidance to initiate and lead their own ESPCs. The SEM team remain available to provide technical assistance with ESPC projects as they progress. This toolkit is intended to help agencies take ownership of their energy saving projects as they strive to meet the energy reduction goals outlined in Executive Order 2016-03. The SEM Office continues to refine this toolkit to meet the specific needs of NH state agencies and to make the process of ESPCs more approachable and successful. With greater ease of use, this toolkit is intended to free up the time of the minimally staffed SEM Office and encourage more projects to occur under the leadership of individual agencies.

In preparation for performance contracting, a facility may elect to defer energy related upgrades so that they can be included in the overall project. Longer payback items are offset by energy measures with quicker paybacks and the blending of these projects helps to make the initiative more comprehensive and financially viable.

Future Energy Projects

Based on the information received in the individual agency conservation plans, the SEM team has compiled a list of measures proposed by agencies to be pursued in FY20 and fiscal biennium FY20/21 (see *Table 2: Proposed Efficiency Measures for Fiscal Year 2020*). This list is by no means exhaustive; however it does provide some insight to what agencies see as priority energy efficiency improvements needed in their facilities. The majority of the identified efficiency measures fall into one of three categories that address common deficiencies in state-owned building stock:

1. **Lighting:** the majority of these facilities are equipped with antiquated and inefficient lighting systems. The SEM Office recommends a statewide initiative to upgrade all facility lighting systems to LED fixtures with advanced controls to significantly reduce state energy use and improve occupancy safety and comfort.
2. **Heating, ventilation and air conditioning (HVAC):** HVAC systems in state facilities tend to be old, inefficient and difficult to control. The SEM office recommends further study by agencies to prioritize facilities and proactively upgrade HVAC systems and controls with a focus on efficiency and fossil fuel reductions.
3. **Building envelope:** All facilities would benefit considerably from weatherization improvements. Cost effective measures such as air sealing and insulation would provide significant energy cost reductions (heating and cooling) as well as increased occupancy comfort year-round. The SEM Office recommends a state wide weatherization initiative to provide all agencies easier access to energy audits and building envelope improvements.

Additional efficiency improvements could be completed through energy saving performance contracts. Energy audits and other similar studies can provide tremendous value to agencies by identifying deficiencies, prioritizing a plan and presenting data which allows agencies to make informed capital investments and maximize their energy savings.

While *Table 1* serves as an indication of the amount and type of energy efficiency projects that need to be completed across the State; situations and technologies change over time and a department's priorities may shift due to these circumstances. The SEM Office supports departments in getting critical projects implemented quickly and focuses on energy saving projects that will provide the most benefit to the State. Based on information provided by the departments in their plans, it is evident that many were able to find funding for smaller (under \$50,000) projects, but struggled to complete projects in the \$100,000 to \$500,000 range. For example, a small lighting retrofit can often be accomplished within the operating budget of a department, but a large facility lighting system retrofit can run several hundred thousand dollars which makes it unattainable within most agencies' biennial budget.

Given the tight operating budgets and a growing backlog of deferred maintenance, most agencies report that the lack of resources is the biggest hurdle in implementing energy efficiency improvements to their facilities. Historically, the \$500,000 in capital allocations provided to the SEM Office was the only source of funding available for many agencies to pursue energy efficiency improvements. Unfortunately, the FY20/21 capital budget did not include funding for energy efficiency improvements in state-owned facilities. That funding change will necessitate some changed tactics to keep making progress toward the state's energy and fossil fuel reduction goals.

The State Energy Management team believes that comprehensive and widespread energy efficiency investments are needed to meet the ambitious energy reduction targets outlined in Executive Order 2016-03. The State Energy Manager will continue to use energy saving performance contracts to achieve reductions throughout state agencies. State departments would be able to do more to achieve statewide reduction goals if they had access to more resources including professional studies and audits, training, funding, and additional staff that are able to assist in the implementation of energy saving measures. State departments are spending more on energy and maintenance than they need to if we work together for savings. A combination of education, funding, and staff resources are necessary to improve the energy performance of state facilities, and in turn, divert tax dollars away from energy bills and towards other areas that provide value to the public.

Appendix A: Agency Conservation Plans submitted FY19, Property Owners

1. New Hampshire Department of Military and Veteran's Affairs
2. New Hampshire Department of Administrative Services
3. New Hampshire Employment Security
4. New Hampshire Department of Environmental Services
5. New Hampshire Fish & Game
6. New Hampshire Liquor Commission
7. New Hampshire Police Standards & Training Council
8. New Hampshire Department of Safety
9. New Hampshire Department of Transportation
10. New Hampshire Veterans Home
11. New Hampshire Department of Health and Human Services
12. New Hampshire Department of Natural and Cultural Resources
13. New Hampshire Veteran's Home
14. New Hampshire Lottery Commission
15. New Hampshire Department of Business & Economic Affairs

Appendix B: Agency Conservation Plans submitted FY19, Non-Property Owners

1. New Hampshire Department of Agriculture, Markets & Food
2. New Hampshire Banking Department
3. Office of Strategic Initiatives
4. New Hampshire Public Utilities Commission
5. New Hampshire Department of Revenue Administration
6. New Hampshire Department of Education

Appendix C: Fiscal Year 2019 Annual Energy Report

Table 1: Proposed Efficiency Measures for Fiscal Year 2020 (As provided by departments in agency-level plans)

Agency & Bureau	Measure Description	Building(s) Impacted	Investment Cost	Expected Annual Energy Cost Savings	Simple Payback (Years to Recoup Cost)
Statewide					
	LED lighting conversion with advanced controls (phase I)	Various	\$ 4,700,000.00	\$ 670,000.00	7.0
	Building weatherization measures (phase I)	Various	\$ 4,700,000.00	\$ 940,000.00	5.0
Adjutant General					
	Net zero upgrades (HVAC, insulation, etc.)	State Military Reservation	\$ 1,500,000.00	\$ 112,000.00	13.4
	Solar P.V. array	Center Strafford (Range)	\$ 200,000.00	\$ 12,000.00	16.7
	Comprehensive Lighting Retrofit	TS, Thomas Hall	\$ 8,375.00	\$ 586.74	14.3
	Center Strafford Water Improvements	Training Site Buildings	\$ 500,000.00	\$ 40,000.00	12.5
	Microgrid Study	AASF, Littleton	TBD		
DAS					
	LED lighting upgrade (Phases I & II)	Walker Building	\$ 300,000.00	\$ 30,000.00	10.0
DAS - Court Facilities					
	(2) New high efficiency boilers	Coos County courthouse	\$ 166,500.00	\$ 6,552.00	25.4
	(2) New high efficiency boilers	Rochester circuit courthouse	\$ 126,000.00	\$ 2,085.00	60.4
	New cooling system and controls	Hillsborough South courthouse	\$ 700,000.00	\$ 16,660.00	42.0
	Energy Saving Window Quilts	Various locations	\$ 20,000.00	\$ 3,580.00	5.6
	LED Lighting upgrades	Lebanon circuit courthouse	\$ 30,000.00	\$ 6,000.00	5.0
Department of Environmental Services					
	2.7 kW PV Array	Pierce Island Air Monitoring Station, Lakeport Caretaker House	\$ 30,000.00	\$ 1,500.00	20.0
	Building air sealing and insulation	All air monitoring stations	\$ 5,000.00	\$ 1,000.00	5.0
	Consider replacing sites that do not meet current State of NH energy codes used for long term monitoring with new structures meeting those codes and in potential flood plain area	Keene	\$ 20,000.00	\$ 630.00	31.7
	Install high-efficiency air-source electric pumps	Camp Dodge, Laconia Air Monitoring Stations	\$ 8,400.00	\$ 3,000.00	2.8

Agency & Bureau	Measure Description	Building(s) Impacted	Investment Cost	Expected Annual Energy Cost Savings	Simple Payback (Years to Recoup Cost)
	LED bay lights in basement	WRBP Wastewater treatment plant	\$ 10,625.00	\$ 1,428.00	7.4
	LED lighting retrofit - office area	WRBP Laconia Maintenance Shop	\$ 3,280.00	\$ 434.00	7.6
	Window replacement/sealing	WRBP Wastewater treatment plant	\$ 46,675.00	\$ 3,609.20	12.9
	Replace back-up generator	WRBP Wastewater treatment plant	\$ 190,000.00	\$ 1,810.90	104.9
	Aeration blower retrofit	WRBP Wastewater treatment plant	\$ 400,000.00	\$ 29,218.00	13.7
	Install high efficiency sludge pumps	WRBP Wastewater treatment plant	\$ 91,000.00	\$ 13,000.00	7.0
	Aeration process valve upgrade	WRBP Wastewater treatment plant	\$ 337,000.00	\$ 60,000.00	5.6
	upgrade generator block heaters	Glendale pump stations	\$ 1,630.00	\$ 1,230.00	1.3
	High efficiency air-monitoring equipment	Londonderry and Portsmouth stations	\$ 72,000.00	\$ 9,000.00	8.0
	Energy Audit	WRBP Wastewater treatment plant	TBD		
Department of Natural and Cultural Resources					
	LED lighting	Lafayette bathhouse	\$ 2,500.00	\$ 800.00	3.1
	Pellet Stove & insulate	(GRN03) Greenfield garage/office	\$ 4,500.00	\$ 597.00	7.5
	Boiler replacement	(COL)01 Admin Building	\$ 3,550.00	\$ 750.00	4.7
	Solar PV & battery sys - no grid	PLS01	\$ 5,200.00	\$ 500.00	10.4
	Tstats - internet accessible	various sites 10	\$ 1,900.00	\$ 597.00	3.2
	evaluate HVAC & t-8 to LED	Coleman Bathhouse	\$ 1,600.00	\$ 420.00	3.8
Department of Transportation					
	Solar Garage Doors	M115	\$ 10,000.00	\$ 1,990.00	5.0
	Furnace improvements	M107W, M105, M102, M101	\$ 11,183.00	\$ 1,194.00	9.4
	Wood Boiler installation	M124	\$ 24,000.00	\$ 4,975.00	4.8
	Solar Panels	M105	\$ 30,000.00	\$ 2,100.00	14.3
	Tankless H/W heater	M125M	\$ 1,200.00	\$ 298.50	4.0
	Wood Boiler installation	M115	\$ 24,000.00	\$ 4,975.00	4.8
	LED lighting conversion	All Building	\$ 5,000.00	\$ 932.40	5.4
	Add reflective coating	All Building	\$ 5,000.00	\$ 560.00	8.9
	Upgrade ceiling insulation	All Building	\$ 10,000.00	\$ 298.50	33.5
	Improve weatherization	All Building	\$ 5,000.00	\$ 995.00	5.0
	Install sub-meters	District 2 Office	\$ 4,000.00	\$ 350.00	11.4

Agency & Bureau	Measure Description	Building(s) Impacted	Investment Cost	Expected Annual Energy Cost Savings	Simple Payback (Years to Recoup Cost)
	Upgrade windows/ doors	D2 Office, 206, 210, 214 (old), 224 (old), Satellite Garage, LRA	\$ 20,000.00	\$ 1,800.00	11.1
	Install Propane water heater	201, 205	\$ 4,000.00	\$ 700.00	5.7
	remote control for overhead doors	Multiple	\$ 1,500.00	\$ 100.00	15.0
	remove skylights, board up end overhead door, replace pass door, upgrade interior lighting	224 (old)	\$ 3,500.00	\$ 350.00	10.0
	disable furnace for cellar	SRA	\$ 5,000.00	\$ 547.25	9.1
	Install additional window treatments	District 2 Office	\$ 2,500.00	\$ 238.80	10.5
	add heating zone	District 2 Office	\$ 3,000.00	\$ 497.50	6.0
	new insulation will be installed during reconstruction	310 Warehouse	\$ 2,000.00	\$ 445.00	4.5
	install styrofoam insulation, zip board and vinyl siding	District 3 office	\$ 3,000.00	\$ 302.60	9.9
	Overhead Door Remotes	All D3 Patrol Sheds	\$ 3,500.00	\$ 398.00	8.8
	Outdoor Wood Fired Boilers	PS 401A, 403, 404, 405, 408, 409, 410, 411, 412, 413	\$ 250,000.00	\$ 21,320.86	11.7
	Wood/Oil boilers	Shed 303,302	\$ 20,000.00	\$ 2,000.00	10.0
	Furnace tune-ups/maintenance (clean furnaces)	All	\$ 4,400.00	\$ 490.75	9.0
	Replace Overhead Doors	PS516 - Londonderry	\$ 15,000.00	\$ 800.00	18.8
	Re-Install outside wood boiler	PS504-Henniker (Salvaged from New PS528)	\$ 5,000.00	\$ 2,985.00	1.7
	Insulated windows, wall and ceiling insulation, siding, entry doors	PS515 - Hollis	\$ 25,000.00	\$ 1,600.00	15.6
	Annual Furnace Preventive Maintenance	North Hampton, Lancaster, Twin Mountain, Center Ossipee	\$ 1,200.00	\$ 400.00	3.0
	Replace old ceiling fans	North Hampton, Lancaster, Twin Mountain, Center Ossipee, Enfield, Swanzey	\$ 3,600.00	\$ 480.00	7.5
	Lighting Upgrade	Traffic Signals Bldg. (Bldg. C) Replace lights (fluorescent to LED)	\$ 400.00	\$ 148.40	2.7
	Building Insulation	Traffic Bldg. B	\$ 4,300.00	\$ 1,000.00	4.3
	Heating System Repair	Traffic Pavement Marking Building (Bldg. B)	\$ 5,000.00	\$ 624.00	8.0
	LED upgrades	Mechanical Services (Various facilities)	\$ 40,000.00	\$ 6,500.00	6.2

Agency & Bureau	Measure Description	Building(s) Impacted	Investment Cost	Expected Annual Energy Cost Savings	Simple Payback (Years to Recoup Cost)
	Energy Star air conditioners	Various locations	\$ 8,000.00	\$ 1,500.00	5.3
	Highway LED conversion	NH Turnpikes and Highways	\$ 366,105.00	\$ 103,500.00	3.5
	Circulation/Destratification Fan	Traffic Pavement Marking Bldg. (Bldg. B) Add ceiling fan to homogenize temperatures	\$ 1,000.00	\$ 84.24	11.9
Fish & Game					
	LED Lighting upgrade	Headquarters	\$ 4,000.00	\$ 1,246.00	3.2
	Emergency lighting & general energy improvements	several NHFG buildings	\$ 30,000.00	\$ 3,500.00	8.6
	Upgrade HVAC system	Warren fish hatchery	\$ 10,000.00	\$ 800.00	12.5
	ECM circulator pump upgrade	Headquarters	\$ 4,000.00	\$ 1,000.00	4.0
	ECM circulator pump upgrade	Various facilities	\$ 20,000.00	\$ 5,000.00	4.0
	LED lighting upgrade	Region 2 Office	\$ 1,000.00	\$ 300.00	3.3
Employment Security					
	LED lighting upgrades	Conway, Berlin, Nashua	\$ 60,000.00	\$ 12,000.00	5.0
Health and Human Services - Glenclyff Home					
	Convert LaMott Wing to Pellet Boiler	LaMott Wing	\$ 350,000.00	\$ 18,600.00	18.8
	Convert small out buildings from fossil fuels	Birchwood, Carpenter Shop, Painter Shop, Cottage, Superintendents House	\$ 30,000.00	\$ 2,600.00	11.5
	Continue Replacement of Administration Windows	Administration	\$ 50,000.00	\$ 2,300.00	21.7
	Replace Laundry Washing Machines	Laundry	\$ 50,000.00	\$ 3,100.00	16.1
	Infrastructure improvements to capture addition condensate	Whole campus	\$ 530,000.00	\$ 25,000.00	21.2
	Upgrade Hydro Generator	Whole campus	\$ 350,000.00	\$ 27,000.00	13.0
	Replace Steam Engines with Steam Turbine	Whole campus	\$ 400,000.00	\$ 30,000.00	13.3
	On going campus electrical study for improvements	Whole campus	\$ 62,000.00		
	Replace 143 windows in LaMott Wing	LaMott Wing	\$ 511,000.00	\$ 25,000.00	20.4
	Review and implement electrical study	Whole campus	\$ 600,000.00		
	rebuild prime power generators	Whole campus	\$ 100,000.00	\$ 11,000.00	9.1
Health and Human Services - New Hampshire Hospital					
	Upgrade air handler system	APS	\$ 2,400,000.00	\$ 120,000.00	20.0

Agency & Bureau	Measure Description	Building(s) Impacted	Investment Cost	Expected Annual Energy Cost Savings	Simple Payback (Years to Recoup Cost)
Health and Human Services - Juvenile Justice Services					
	LED lighting upgrade	Recreation building	\$ 30,000.00	\$ 7,500.00	4.0
	Exterior LED lighting upgrade	Whole campus	\$ 40,000.00	\$ 9,000.00	4.4
Veterans Home					
	Heat-pump upgrades	Whole campus	\$ 1,170,000.00	\$ 18,750.00	62.4
Police Standards & Training Council					
	Boiler replacements	Main, Tactical	\$ 1,035,000.00	\$ 80,000.00	12.9
	LED lighting upgrade	Whole campus	\$ 40,000.00	\$ 7,500.00	5.3
	Domestic Hot Water	Dorm	\$ 20,000.00	\$ 3,120.00	6.4
Department of Business and Economic Affairs					
	LED upgrades	All State rest areas	\$ 50,000.00	\$ 9,500.00	5.3
	ECM circulator pump upgrades	All State rest areas	\$ 15,000.00	\$ 5,000.00	3.0
	Lobby lighting improvements	Salem rest area	\$ 12,000.00	\$ 2,000.00	6.0
Department of Safety					
	Update HVAC System & Controls & Lighting	Troop C/Keene DMV station	\$ 1,166,500.00	\$ 150,000.00	7.8
	LED Parking light upgrade	Troop A - MV Substation (Epping), Troop E - MV Substation (Tamworth), Troop F - MV Substation (Twin Mtn)	\$ 20,000.00	\$ 3,650.00	5.5
	Building Envelope	Troop A - MV Substation (Epping), Troop E - MV Substation (Tamworth), Troop F - MV Substation (Twin Mtn)	\$ 30,000.00	\$ 6,000.00	5.0
	Update HVAC System & Controls	Troop F - MV Substation (Twin Mtn), Troop G - Aviation, Windham N & S, Warehouse	\$ 230,000.00	\$ 24,100.00	9.5
	Motion Sensors in conference rooms	James Hayes Bldg. - Safety	\$ 2,000.00	\$ 630.00	3.2
	Additional Remote Thermostats	Misc. Buildings	\$ 2,500.00	\$ 500.00	5.0
	Building weatherization measures	Troop A, Troop E - MV Substation (Tamworth), Troop F - MV Substation (Twin Mtn), Troop D, Dover sub station	\$ 50,000.00	\$ 10,000.00	5.0
	LED Office Lighting Upgrade	Troop A - DMV Substation (Epping), Troop D, Troop E - DMV Substation (Tamworth), Troop F - DMV Substation (Twin Mtn), Troop G - Aviation, Dover DMV Substation	\$ 155,000.00	\$ 27,500.00	5.6

Agency & Bureau	Measure Description	Building(s) Impacted	Investment Cost	Expected Annual Energy Cost Savings	Simple Payback (Years to Recoup Cost)
	LED lighting upgrade	Fire Academy	\$ 50,000.00	\$ 9,300.00	5.4
	HVAC and Controls System Upgrade	Fire Academy Dormitory (boiler), Firehouse, Aircraft Facility, storage building, dorm (controls upgrade)	\$ 265,000.00	\$ 23,000.00	11.5
Multiple Agency - Employment Security, DOT, Fish & Game, Dept. Administrative Services, Dept. Natural & Cultural Resources					
	Energy Saving Performance Contract - Seacoast	21 Buildings in the Seacoast Region	\$ 2,900,000.00	\$ 213,000.00	13.6
Totals			\$ 27,957,123.00	\$ 3,034,964.64	9.2

Table 2: SEM Capital Funded Project Summary FY18/19

AGENCY & BUREAU	LOCATION	DESCRIPTION	SEM Contribution	CALC. SAVINGS (per year)	PAYBACK (yrs)
DAS - General Services					
	Concord Supreme Court	Exterior LED upgrade	\$3,204.51	\$447.81	7.2
	Storr St. Warehouse	Exterior LED upgrade	\$1,542.99	\$341.11	4.5
	Concord Supreme Court	Exterior LED and building insulation	\$92,000.00	\$17,284.00	5.3
	Walker Building	LED lighting upgrade (A-Wing)	\$40,000	\$4,000.00	10
Adjutant General					
	Milford Readiness center	Boiler upgrade	\$60,000.00	\$6,500.00	9.2
DAS - Court Facilities					
	Rockingham courthouse	(2) High efficiency boilers	\$52,000.00	\$10,598.00	4.9
Police Standards & Training Council					
	Tactical Center	replace (2) oil boilers with (1) Rinnai water heater	\$4,000.00	\$681.00	5.9
Department of Corrections					
	Berlin Men's Prison	Outdoor security lighting upgrade	\$46,000.00	\$20,000.00	2.3
Department of Transportation					
	Shed 116	Insulated garage door with high speed motor	\$9,998.00	\$1,250.00	8.0
	Shed 116	High bay LED lighting	\$1,449.00	\$500.00	2.9
	Shed 115	Outdoor wood boiler	\$19,249.00	\$3,000.00	6.4
	Shed 111	Insulated garage door with high speed motor	\$9,998.00	\$1,250.00	8.0
Department of Natural and Cultural Resources					
	Hampton State Park	replace T12 fixtures with LED	\$7,704.00	\$900.00	8.6
	Colman State Park	Pellet Stove fireplace insert	\$3,931.97	\$600.00	6.6
	Lake Francis State Park	Facility upgrade to LED lighting	\$2,622.05	\$500.00	5.2
	Crawford Notch S.P.	Facility upgrade to LED lighting	\$8,000.00	\$1,200.00	6.7
	Bear Brook State Park	LED upgrade and mini-split heat-pump	\$1,864.40	\$900.00	2.1
	Coleman State Park	pellet stove insert in fireplace	\$3,693.00	\$600.00	6.2
Department of Safety					
	Safety Automotive garage	upgrade various lighting to LED	\$3,184.60	\$496.08	6.4
	State Warehouse	upgrade various lighting to LED	\$10,542.00	\$1,831.49	5.8
Employment Security					
	Salem office	upgrade all lighting to LED	\$14,462.79	\$2,200.00	6.6
Veterans Home					
	Veterans Home	Boiler conversion to NG	\$38,432.72	\$30,500.00	1.3
Fish & Game					
	Milford Hatchery	LED lighting upgrade (whole building)	\$10,000.00	\$3,119.00	3.2
Department of Environmental Services					
	Portsmouth air monitoring station	Replace old air monitor with new high-efficiency unit	\$18,000.00	\$1,500.00	12
Glencliff Home					
	Glencliff Home facilities	LED Lighting upgrades	\$11,000.00	\$3,100.00	3.5
Liquor Commission					
	Store #2, Chesterfield	LED upgrade	\$4,255.00	\$2,052.00	2.1
	Store #62, Raymond	LED upgrade	\$13,673.00	\$3,000.00	4.6
New Hampshire Hospital					
	APS	VFD motor control Kitchen hood	\$9,352.00	\$2,849.00	3.3
	APS	add'l optical sensors for kitchen hood	\$1,310.00	\$400.00	3.3
Totals			\$501,469.03	\$121,599.49	4.1