

Dover School District Middle School

ECM OPTIONS

EEI: New England's ESCO



Our **only focus** is energy projects in New England



18 years of local performance contracting experience



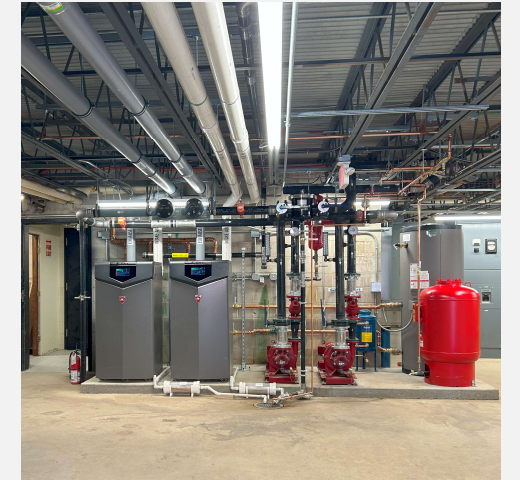
Fully independent of any manufacturers' product lines



Only locally owned New England Energy Services Company accredited through the National Association of Energy Services Companies.

More than
490 projects
completed across
New England

NAESCO ACCREDITATION



NAESCO performed a rigorous examination of our **technical expertise & business practices.**



EEl demonstrated expertise in the full range of **energy services for performance-based energy projects.**



EEl is one of only 22 accredited ESCOs across the country, and **the only one based in New England!**

WHY IS THIS
IMPORTANT?

Local Experience

- City of Dover
- City of Portsmouth
- Schools of Portsmouth
- City and Schools of Manchester
- Amherst
- Nashua
- Keene
- City of Dover
- Raymond
- Chesterfield
- Timberlane
- Lisbon
- Belmont



Energy Modeling and Building Study



- § For each customer and specific project, we conduct an energy model analysis of the potential solutions, utilizing the Carrier HAP software.
- § We use this software to highlight system performance, size new equipment, and calculate overall energy costs for each potential design.
- § The existing building is modeled first and compared/fine tuned against actual historical utility bill data provided by the customer. This creates an accurate baseline before moving forward with modeling any proposed solutions.

Annual Energy and Emissions Summary	
Project: Dover Middle School 07.09.25	07/09/2025
Prepared by: EEI Services, Inc.	4:54 PM

Table 2. Annual Energy Consumption

Component	Baseline Building	ECM 1A - Air Cooled CHW & DX RTUs	ECM 1B - Air Cooled CHW & DX RTUs + Condensing Boiler	ECM 1C - At Scale GSHP	ECM 1D - Full Scale GSHP Plant
HVAC Components					
Electric (kWh)	831,410	1,034,217	1,002,567	1,124,969	1,204,594
Natural Gas (Therm)	46,530	28,087	22,058	13,762	9,261
Fuel Oil (na)	0	0	0	0	0
Propane (na)	0	0	0	0	0
Remote HW (na)	0	0	0	0	0
Remote Steam (na)	0	0	0	0	0
Remote CW (na)	0	0	0	0	0
Non-HVAC Components					
Electric (kWh)	703,544	703,565	703,565	703,526	703,540
Natural Gas (Therm)	0	0	0	0	0
Fuel Oil (na)	0	0	0	0	0
Propane (na)	0	0	0	0	0
Remote HW (na)	0	0	0	0	0
Remote Steam (na)	0	0	0	0	0
Totals					
Electric (kWh)	1,534,954	1,737,782	1,706,132	1,828,496	1,908,134
Natural Gas (Therm)	46,530	28,087	22,058	13,762	9,261
Fuel Oil (na)	0	0	0	0	0
Propane (na)	0	0	0	0	0
Remote HW (na)	0	0	0	0	0
Remote Steam (na)	0	0	0	0	0
Remote CW (na)	0	0	0	0	0

Table 3. Annual Emissions

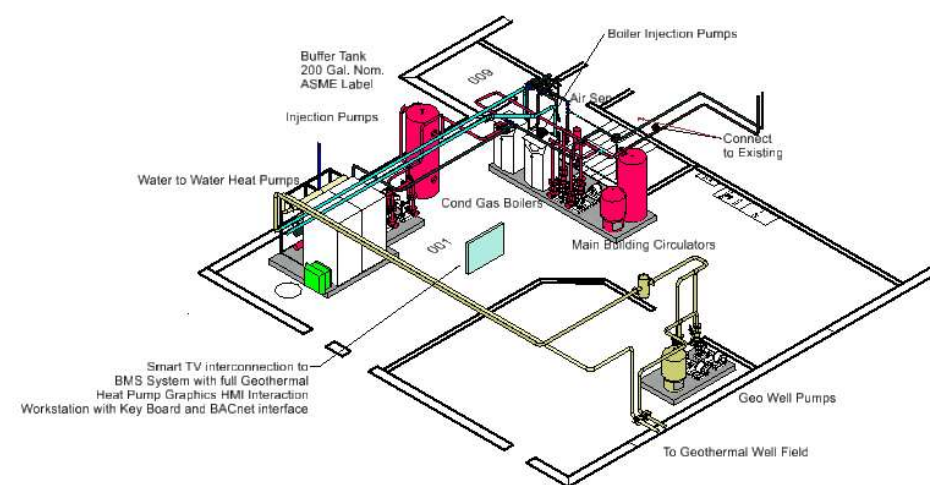
Component	Baseline Building	ECM 1A - Air Cooled CHW & DX RTUs	ECM 1B - Air Cooled CHW & DX RTUs + Condensing Boiler	ECM 1C - At Scale GSHP	ECM 1D - Full Scale GSHP Plant
CO2 Equivalent (lb)	1,022,571	860,624	778,300	714,797	684,314

DOVER SCHOOL DISTRICT ECM MATRIX												
Facility	ECM Number	Project	Selected Yes	Budget Cost	Grant, Rebates, Credits	Total Cost Minus Grants	Annual Utility Savings				Simple Payback (Years)	Scope Notes
							Electric (kWh)	Natural Gas (therms)	\$	CO2 Emissions (lbs)		
Dover Middle School	ECM-1A	DX RTUs & Air Cooled CHW AHUs	☐	\$4,668,675	\$50,000	\$4,618,675	-202,828	18,443	-\$12,347	161,947	N/A	Air cooled chiller plant to serve interior equipment. DX for rooftop equipment.
Dover Middle School	ECM-1B	DX RTUs & Air Cooled CHW AHUs + Condensing lead boilers	☐	\$5,094,275	\$75,000	\$5,019,275	-171,178	24,472	\$268	244,271	N/A	Air cooled chiller plant to serve interior equipment. DX for rooftop equipment.
Dover Middle School	ECM-B	At Scale Ground Source using (Dig Energy)	☐	\$7,196,795	\$2,401,690	\$4,795,105	-293,542	32,768	-\$10,578	307,774	N/A	GSHP plant to serve interior equipment. DX for rooftop equipment. Includes
Dover Middle School	ECM-1C	At Scale Ground Source Heat Pump Plant with wells in field (limited parking lot work)	☒	\$8,674,215	\$2,904,013	\$5,770,202	-293,542	32,768	-\$10,578	307,774	N/A	GSHP plant to serve interior equipment. DX for rooftop equipment. Includes
Dover Middle School	ECM 1-D	Full Scale Geo Using Pioneering Well Technology (Dig Energy)	☐	\$8,915,545	\$2,841,565	\$6,073,980	-373,180	37,269	-\$18,718	338,257		A Woman owned NH company is developing a low impact drilling that is under testing. We recommend not
Dover Middle School	ECM-1D	Full Scale Ground Source Heat Pump 700' traditional closed close	☐	\$9,732,545	\$3,263,845	\$6,468,700	-373,180	37,269	-\$18,718	338,257	N/A	GSHP plant to serve all equipment. Includes repaving parking lot.
Dover Middle School	ECM-2	Solar	☒	\$1,230,000	\$313,000	\$917,000	472,861	0	\$69,657	141,858	13	
Dover Middle School	ECM-3A	Roof Restoration 20 year life	☒	\$578,550	\$0	\$578,550	0	0	\$0	0	N/A	
Dover Middle School	ECM-3B	Roof Replacement with added installation	☐	\$1,308,720	\$0	\$1,308,720	0	0	\$0	0	N/A	
Total Selected				\$10,482,765	\$3,217,013	\$7,265,752	179,319	32,768	\$59,079	449,632		

ECM Matrix

Achieving Net Zero

Essex North Shore Agricultural & Technical School, Danvers MA:
Campus Geothermal





THANK YOU