

Tell Me More

- One possible option that will be studied is a central heating plant that would pipe hot water through a system of insulated underground pipes to provide heat for both schools
- Modern wood heating (chips or pellets) has been adopted in over 40 NH public and private schools
- Plant may be located on access road to HUES
- Chips or pellets would be sourced sustainably from local suppliers, keeping fuel dollars in local economy
- State has incentives to support renewable energy aspects of the project



Item	Proposal	Details
Consulting Coordinator	\$47,500	Project coordination, technical and cost analysis; public outreach; fund raising evaluation; grant writing
Architect	\$41,000	CAD drawing conversion; boiler house and solar design; envelope review; distribution piping; presentations
Mechanical Engineer	\$5,000	Existing building distribution evaluation and redesign; boiler plant layout; district piping; air exchange
Electrical Engineer	\$2,500	Rewire design of existing buildings; design new building; air exchange
Estimator	\$4,000	Estimate final proposals to establish financing figures for bond
TOTAL	\$100,000	



Information on
Hollis NH School District
2016
Warrant Article 4
Energy Study



Summary

\$100K for experts in the sustainable energy field to provide Hollis School Board a detailed plan to establish a wood chip based central district heating system to replace the oil based systems in both Hollis Primary and Hollis Upper Elementary Schools. The Plan also will include:

- Solutions for high priority efficiency measures identified in the ASHRAE Level III audit reports to reduce the heat load on the wood chip based heating system
- Exploring a solar thermal energy (hot water and heat) solution which provides hot water to both school buildings when the wood chip based system is shut down in the summer
- Developing a 100kw PV ground based solar farm to provide partial energy needs

The detailed plan is expected to result in an integrated system solution that pays for itself based on grants, credits and savings in the fuel costs.

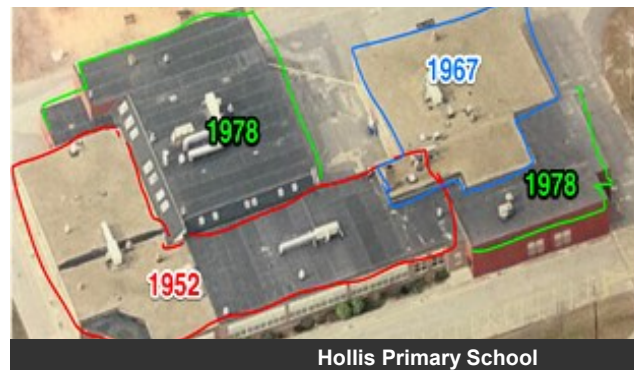


What the Study Involves?

- A development plan for the Hollis Upper Elementary and Primary School heating systems
- Design outlines for a recommended solution
- Evaluation of solar electric generation and other renewable options
- Analysis of funding support (grants, rebates, fuel & maintenance savings, etc)
- Analysis of permitting issues and preliminary cost/benefit and ROI
- Opportunities for committees and the public to review the developing plan during 2016
- Data to support a bond article to be submitted in March 2017

Background:

- Primary School – 1952, 1967, 1978
- HUES – 1980, 1997
- Pressing end of life replacement issues for oil boilers and heat distribution systems
- \$250,000/yr (electricity and heating fuels)



Hollis Primary School

Why Is the Study Necessary?

- Existing oil heating plants in both schools are reaching end of life
- Current boilers range in age from 2 to 35 years
- All boilers are beyond warranty
- Yearly maintenance costs are increasing
- Both school buildings can benefit from investments in efficiency that will reduce operating costs
- A proactive approach helps avoid system failures and unanticipated closures
- New technologies and building upgrades are expected to save enough to cover annual bond costs
- Reactive and incremental emergency solutions are more costly



Hollis Energy Committee

Venu Rao, HEC Chair

603-566-9441

Email: Venu_s_rao@yahoo.com

Visit us on the web: http://www.hollishh.org/energy/energy_info.htm