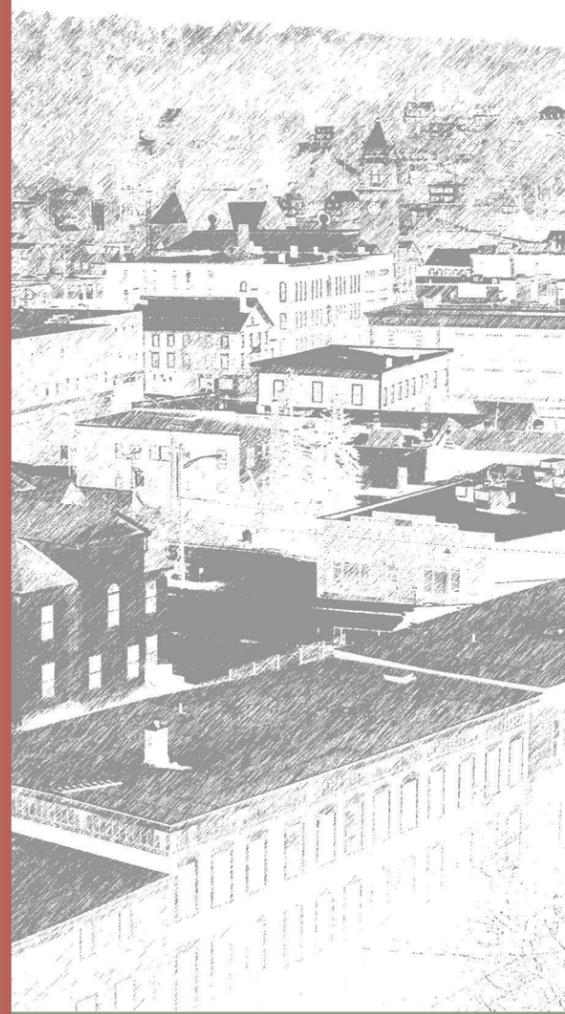




# A Voter's Guide

## to the Proposed City Bond Vote for Local Energy Improvements

*Vote will be held  
Tuesday, June 14th,  
7am - 7pm,  
Montpelier City Hall*



### *Is biomass district energy something new?*

For more than 20 years, the capitol complex in Montpelier, including the State House, has been heated with oil and woodchips through a central plant. It is this facility that would be expanded and modernized, using state-of-the-art technology.

Woodchip district systems have been heating downtown St. Paul, Minnesota since 1983 and downtown Charlottetown, the capital of Canada's Prince Edward Island, since the mid-1990s.

### *How will the district energy system affect city taxes? What about heating bills?*

The district energy system will not increase city taxes. Costs to support the bond payments are offset by eliminating fuel oil heating costs.

The city and schools use approximately 97,000 gallons of oil per year. At \$3.05 per gallon, that's \$305,334 per year for heating fuel and O&M. The bond payments on \$2.75 million average \$175,419 per year (lowered by the favorable terms of the \$750,000 loan from the Clean Energy Development Fund). Wood fuel costs are so much lower than oil that our current estimate for fuel per year is \$68,780, with an additional \$61,135 for O&M. The total cost matches what we're already paying to heat with oil (see chart).

The cost of heat, including the cost of the bond payments, will be comparable to what the city pays now just for heating with oil. As oil prices rise, the potential for savings increase.

**For more detail about the project and the financial analysis, please visit the city's website at [www.montpelier-vt.org](http://www.montpelier-vt.org) and click on District Energy Information, or call the Montpelier Planning Department at (802) 223-9506.**

### *Will burning woodchips pollute our air? What about carbon emissions?*

The new district energy plant would replace a state boiler plant—originally built in the 1940s to burn coal, later converted to oil, then refitted in the 80s to burn woodchips—with a new, modern system. While the new plant is expected to produce about twice as much heat as the current plant, it will release in total fewer regulated air contaminants. Also, the district system will enable downtown buildings to discontinue their use of individual oil furnaces, ending those air emissions.

Carbon emissions are another important concern. When fueled with wood supplied from forests in the Northeast through high-quality forest management and harvesting practices, community-scale woodchip heat that uses modern technology is a low-carbon option.

### *Is there a reliable fuel supply?*

Within 50 miles of Montpelier are more than 1.75 million acres of forestland. The biomass system would use low-grade wood, whose harvesting can improve forest health. Initial estimates are that the forestland within this distance produces at least 360,000 tons of available fuel wood each year.

The planned district energy plant is expected to use fewer than 20,000 tons per year. With schools and colleges in various parts of Vermont also using biomass heat, there is a growing industry around harvesting and supplying woodchips for fuel.

### *Risk & Risk Management*

As with any large capital project, there are risks associated with the district heating project. Risks that are common with other buried pipe projects carried out by the City include: bids coming in over budget; cost over-runs and change orders during construction; project delays; problems in the engineering design; and disruption of traffic during construction. The city intends to address these problems as we have in other projects, by carrying contingency amounts in the budget, having ready plans for a reduced scope of work, by employing skilled resources to manage the construction, using contractors who have successfully carried out similar work in the past, and by scheduling excavation and pipe installation in discreet sections – some possibly carried out at night – to avoid undue traffic disruption and adverse impact on businesses.

There are additional risks specific to this project. We are implementing the city's district heat pipe installation project in close coordination with the state's modernization of its central biomass plant. This partnership carries risks which we are mitigating through the establishment of a memorandum of understanding (MOU) with the state. The MOU will be the basis of a more detailed contract later, spelling out the long-term contractual relationship under which we will purchase heat for our own use and re-sale to our customers. We will be establishing a new city service. However, this is very similar to the water service we already provide. There will be many common elements: billing, responding to customer service calls, maintaining the buried pipe system, and responding to emergency situations. The city has consulted with other municipalities and firms that operate district heating systems and intends to carry out these new functions using a mix of our own staff resources and hiring out some services from experienced contractors.

# A Voter's Guide to the Proposed City Bond Vote for Local Energy Improvements June 8th Public Hearing 7:00 City Hall

For more than a decade, Montpelier has been exploring ways to cut the city's energy costs, reduce our reliance on oil, and use less energy overall. To meet these goals, the City Council has proposed a \$2.75 million bond vote to build a district energy distribution system, which will go before the voters on June 14th. Additional borrowing may be needed in 2012 for the clean energy assessment program.

After receiving an \$8 million grant from the US Department of Energy (DOE), the City of Montpelier and the State of Vermont have been developing plans to create a biomass district energy system that can provide heat and seasonal hot water to city-owned buildings, local schools, and the state capitol complex, plus buildings throughout the city's commercial center. This system would be fueled with woodchips, harvested from the Northeast. The central heating plant would be an expanded, modernized version of the present-day facility, owned by the State and located behind the Department of Motor Vehicles, which has been heating the capitol complex with oil and woodchips for decades.

The new biomass plant will be owned by the State of Vermont, and will be under contract to sell thermal energy to a City-owned distribution system. This arrangement would enable the buildings to dispense with oil-burning furnaces and buy heat with a simple monthly bill. The passage of the proposed bond vote will enable the city to sell heat to customers, in the same way it now provides water and sewer service.

In November, 2011, Montpelier voters authorized the creation of a city-wide clean energy assessment program. This will allow the city to offer all home and building owners low-cost financing to install energy efficiency measures and renewable energy improvements, and to repay these loans through their property's tax assessment. This program will be available in 2012.

City voters may have questions about the bond vote scheduled on June 14th, which will fund the district heating system. This publication provides some answers. Please take a moment to read it, and to inform your vote.

Annual Cost to Heat MHS, UES, City Hall, Fire Station & Police Station with Current Oil System				Price of Fuel Oil, \$/gal
Fuel	O&M*	Total		
\$297,854	\$7,480	\$305,334		\$3.05
\$317,730	\$7,480	\$325,210		\$3.25
\$366,611	\$7,480	\$374,091		\$3.75
\$415,493	\$7,480	\$422,973		\$4.25
\$488,815	\$7,480	\$496,295		\$5.00

Annual Cost to Heat MHS, UES, City Hall, Fire Station & Police Station with Proposed District Heat System				Price of Wood, \$/ton
Avg. Bond Repayment	O&M	Fuel	Total	
\$175,419	\$61,135	\$68,780	\$305,334	\$45.00
\$175,419	\$61,135	\$81,665	\$318,219	\$55.00
\$175,419	\$61,135	\$94,550	\$331,104	\$65.00

\* Operations and Maintenance

## The Biomass District Energy System

Biomass district energy uses a locally harvested fuel—in this case, pulp-quality woodchips harvested from nearby forests, using approved practices—to produce heat in one central plant. This heat is moved through a system of underground pipes to deliver heat and hot water to customers.

The Montpelier state capitol complex has been heating with an oil and woodchip-fired district system since the late 1980s. The plan is to expand and greatly modernize this plant and build a new distribution system to serve the city and the downtown.

### Where does the money come from?

\$8 million from U.S. Department of Energy.  
\$7 million from the State of Vermont Capital Budget, with \$1.2 million from other sources.

\$1 million grant from Vermont Clean Energy Development Fund (CEDF)

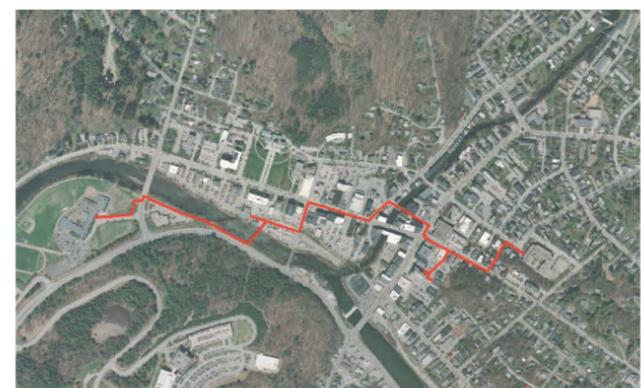
\$2,750,000 city bond, which includes \$750,000 in a deferred payment loan from CEDF.

### Who will receive heat from the district energy system?

The new system will provide heat to the high school, the elementary school, City Hall, the fire station, and the police station, along with the state capitol complex. The plan is to serve the downtown commercial district as well.

### Will building owners be required to buy heat from the district system?

No. Instead, building owners in the district served by the system will be offered the opportunity to connect up. Customers of the system would no longer need to buy, own, or maintain their own furnaces. Instead they would obtain their heat from the district energy system, and be billed for energy used.



Proposed Pipeline Route

### Why do this now?

In 2003, Montpelier voters approved studying the feasibility and developing the technical details of a district energy system. Completion of that work enabled the city to obtain the \$8 million DOE grant. The funding provided by the bond is the next step in making the district energy project a reality. It would put the city in a position to access federal funds for the district energy project under the American Recovery and Reinvestment Act.

### Is all this part of a plan?

Yes. As a community, we have adopted an energy plan that sets the goal of reducing the city's total greenhouse gas emissions by at least 80 percent over the next 20 years. Along with several types of transportation improvements, Montpelier's Energy Plan calls for renewable energy and energy-efficiency measures, like those envisioned through the biomass district energy plant and the clean energy assessment program.