

Potential Natural Gas Service for Windham

Windham Local Energy Committee Initial Assessment

Presentation to WEDC, Infrastructure Sub-Committee

LEC members: Tom Barstow, Neelima Gogumalla, Jim
Hebert, Peter Tousignant, Mark Kovacs, chairman

May, 2014



Outline

- Benefits/costs of natural gas service – top level
- Heating fuels currently utilized in Windham
- Benefits
- Conversion costs
- Natural gas service extension feasibility
- Recommended follow-on assessment activities



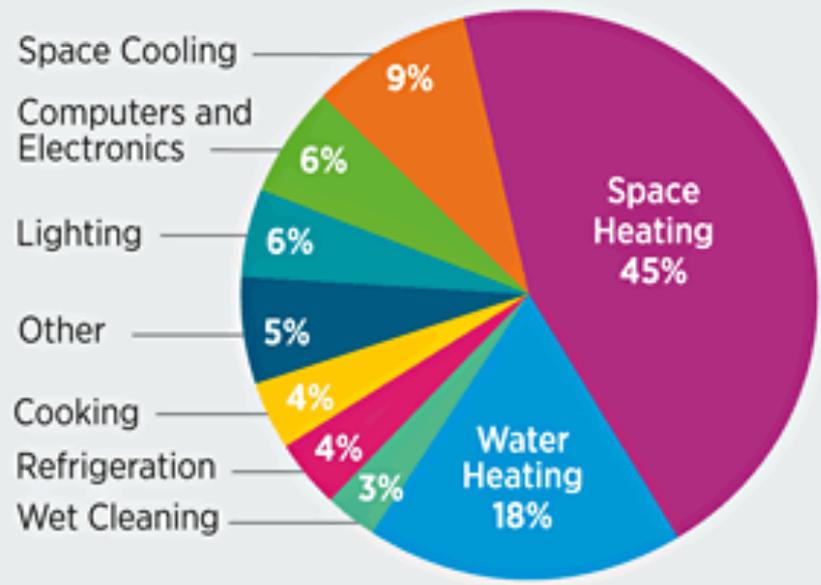
Summary

- Natural gas – a low cost fuel for residential, commercial and industrial heating – not currently available in Windham
 - Many surrounding communities, however, are served by two gas utilities: Unitil and Liberty Utilities
- Windham Local Energy Committee (LEC) has performed exploratory assessment of benefits, risks, conversion and operating costs and approaches for bringing natural gas service to Windham
 - Residential, Town and School heating bills could decrease significantly, by as much as 40%
 - Initial extension costs borne by utility with 20 year customer payback; no direct costs to Town; some tax benefit
- Liberty Utilities is about to initiate economic feasibility study for gas service extension into Windham and service expansion for neighboring towns

Windham LEC will encourage Board of Selectman to approve continued investigation of natural gas extension into Windham



Natural Gas Is Competitive Alternative to Oil and Propane for Cooking and Space/Water Heating



Space Heating, Water Heating and Cooking account for 67% of home energy needs

Fuel Cost (1 Million BTUs)



NH Office of Energy and Planning



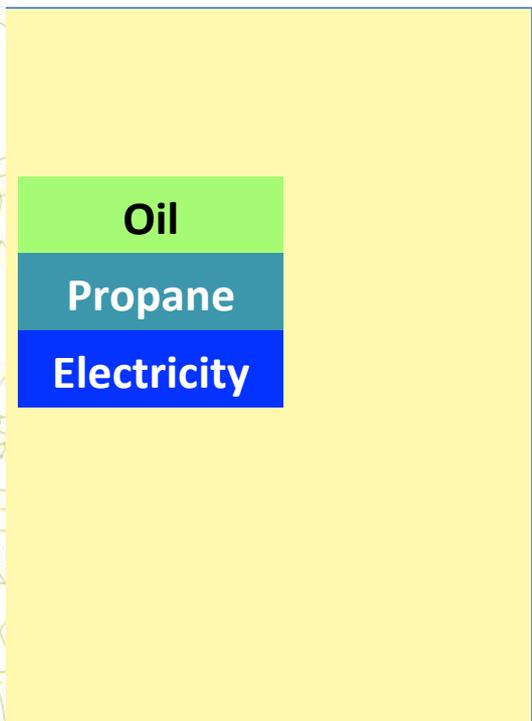
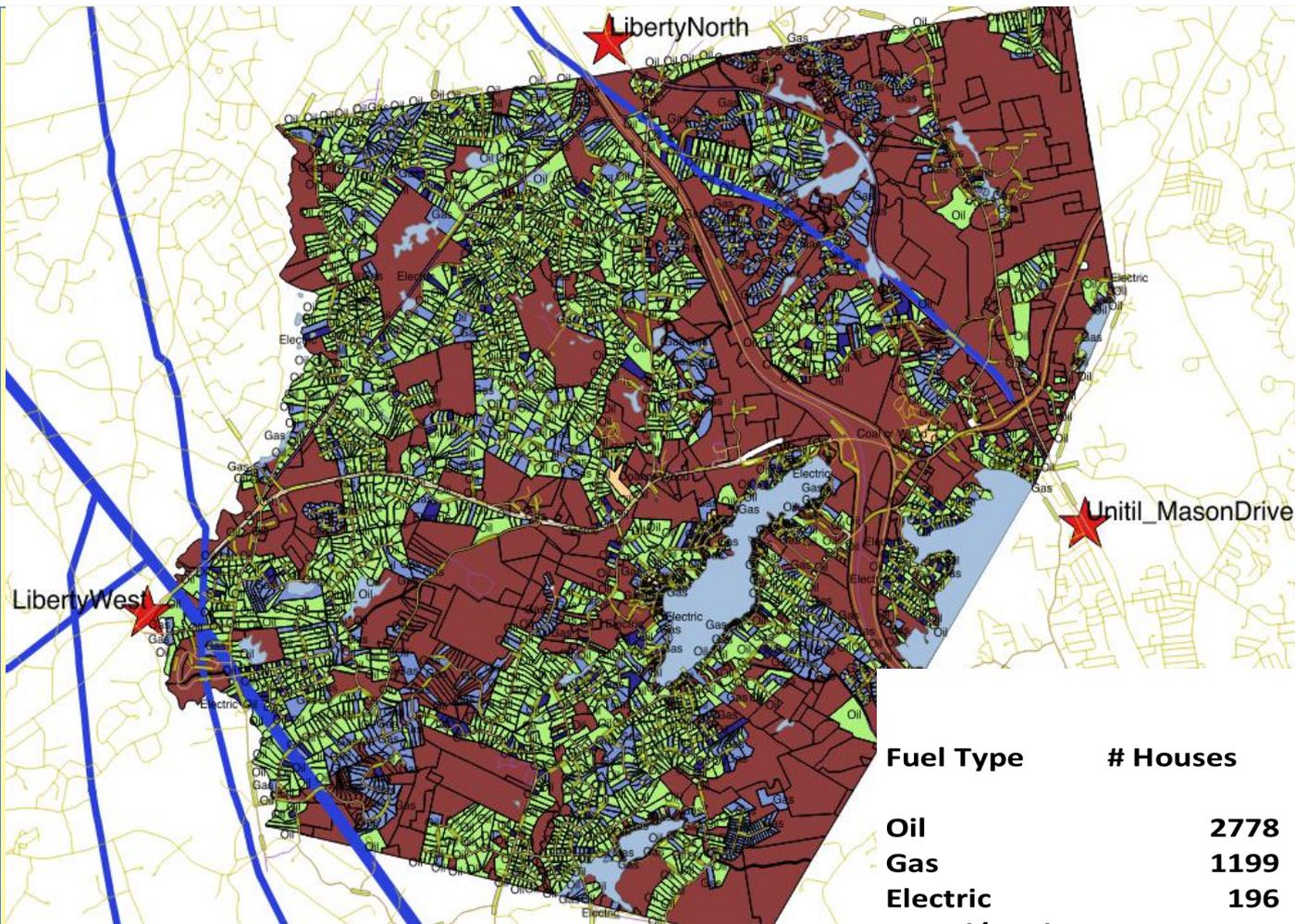
Windham Local Energy Committee

Top-Level Benefits and Costs for Natural Gas

- Benefits
 - Lower annual fuel and maintenance costs
 - Convenient fuel delivery
 - Tax revenue to Town
- Costs
 - Gas line extension
 - Heating system conversion
 - Reduced sales to local fuel suppliers
 - Temporary roadway obstructions during gas line extension; utilities cover costs of road excavation and restoration
 - Temporary disturbance of property while gas line hook-up underway
- Benefit/Cost ??
 - Attractive to commercial users



Oil and Propane Are Principal Heating Fuels for Windham Homes



Fuel Type	# Houses	%	Average House Area (ft ²)	Average Year Built
Oil	2778	61%	2318	1976
Gas	1199	26%	2856	1993
Electric	196	4%	1637	1970
Wood/Coal	46	1%	874	1935
Solar	1	0%	2565	2009
Not Identified	310	7%	1929	1961
Total	4530			

Tennessee Gas Pipeline



Windham Uses Oil and Propane for Space Heating in Schools and Town Buildings

Agency	Fuel Type	Budget	Units (gal)	Estimated Natural Gas (Therms)	Est. Natural Gas Cost after Conversion
Town	Propane	\$75,980	19,800	18,200	\$28,200
School District	Heating Oil	\$293,804	74,800	101,800	\$157,800

Current Fuel Cost = \$370,00

Projected Fuel Cost = \$186,000

2014 Town and School District Proposed Budgets

Significant Reductions in Fuel Costs Possible for Town and Schools



Windham Local Energy Committee

How Does Gas Service Extension Come About?

- Economic decision arrived at by providers – presumably with some potential customer involvement
 - PUC cannot mandate gas service to any area
 - Utility recovers costs through monthly charges to customer and, if necessary, payment prior to gas line extension
 - Utility will likely poll potential customers to evaluate interest
- Municipality grants franchise to utility to provide gas service to specified area; extension costs borne by utility
- Customers pay for extension through “Customer and Delivery Charges” over many years as specified in PUC-approved tariff structure

Economics driven; funded by utility; paid by new users through monthly delivery charges



Utility Recovers Gas Line Extension Costs Via Monthly Customer and Delivery Charges

- Current tariff amortizes extension costs over 20 year period
 - Example, Unitil Monthly Customer and Delivery Charges (summed over year) $\geq 1/8$ per customer cost for gas main extension

Item	Cost per month or per therm	Annual Cost for 1500 Therms (equiv. 1080 gal of oil)
Customer Charge	\$13.73/month	\$165
Delivery Charge	\$0.48/therm	\$720
Total Charges (excludes gas)		\$885

Is $8 * \$885 = \$7080 > \text{Expansion Cost/User ?}$

Est. expansion costs = \$265 - \$480 K/mile (Liberty Utilities 2012 annual report)

Approximately 50 houses/mile (2 houses with 200' frontage) →

Extension cost/user : **\$5,300** - **\$9,600**

Current tariff = OK

Higher tariff required



Homeowners Will Have Varying Conversion Costs Depending upon Existing Fuel

Action	Description	Approx. Cost	Payback Period
Hook-up	< 100 feet to street	Free	--
	> 100 feet to street	\$45.60/foot beyond 100 feet	
Conversion			
Propane	Change nozzles on gas burner	< \$1000	1 ¾ years*
Oil	Replace oil burner with gas burner	\$7,000 - \$10,000	5 ½ - 7 ¾ years
Electricity	Replace heating system	> \$10,000	> 7 ¾ years

Pay-back period can be very short for current propane users



Current Utility Company Service Extension Activities

Liberty Utilities (Bill Clark – Business Development Manager)

Liberty Utilities has received corporate approval to extend natural gas to under-served (limited service, e.g. Derry) and unserved communities (e.g. Windham) in NH

Considering Windham feasibility assessment this summer; would require 4-5 year plan initially beginning along Route 111
Would welcome Windham data

Unitil (Tim Noonan and Rene Bordeleau)

No current planning to extend service into Windham;
Would require expression of interest by group of people to get Unitil to consider economic assessment

Names, addresses, contact info; no strong interest in LEC-generated data



Contact List

- **NH PUC**
 - Mr. Mike Sisto - Consumer Affairs, 603-271-6029
 - Mr. Steve Frink - Assistant Director for Natural Gas, 603-271-7965
 - Mr. Randy Nepper – Director, Safety Division, 603-271-6026
- **Unitil**
 - Mr. Tim Noonis, Sr. Business Development Executive, 603-294-5123
 - Mr. Rene Bordeleau
- **Liberty Utilities**
 - Mr. William Sherry, Vice President for Customer Care, 603-328-2759
 - Mr. William Clark, Director for Business Development, 603-475-8107
- **NH Gas Corp. (Keene, NH)**
 - Manufacture and distribute gas only in Keene, 603) 352-1230
- **Town of Windham**
 - Mr. Rex Norman, Assessor, (603) 434-7530
 - Mr. Eric Delong, IT Manager, (603) 965-1200
 - Mr. David Sullivan, Town Manager, (603) 432-7732



Recent/Possible Future Activities

- Met with Town Manager, David Sullivan, who recommended:
 - Local Energy Committee should prepare a introductory presentation for Selectman
 - Tentative schedule – early May
 - Get concurrence from Selectman on proceeding with utility company discussions and sharing of data
- WEDC and LEC cooperate on further assessment of benefits and costs for natural gas service extension into Windham

