Comprehensive Energy Plan
Answers to DEEP Questions
August 17, 2012

1) How many low-use customers could be converted over the 10-year scenario period?

Although the non-heat/low-use customers appear high, many of these customers do not have the ability to convert to gas heat. For low-use customers living in larger apartment buildings, heat in the majority of cases is supplied by a central boiler. In addition, recent survey information indicates that 25% of low-use customers do not have any interest in converting to gas.

In summary, the LDCs believe that the target for low-use customers is approximately 29,000 customers or 46% of the total. A summary of the analysis conducted by the LDCs is presented below.

	CNG	SCG	YG***	Total
Total Low Use	15,156	22,861	25,000	63,017
Central boiler supplied*	6,506	6,774	10,732	24,012
Total Potential	8,650	16,087	14,268	39,005
Unwilling to convert**	2,163	4,022	3,567	9,751
Total Target	**6,488**	**12,065**	**10,701**	**29,254**

* Based on analysis conducted by CNG/SCG

** Based on a survey conducted by CNG/SCG in 2011

*** Applied same proportion from CNG data

It is important to note that the 29,000 of low-use customers will also experience the same hurdles to convert than the on-main segment, primarily the high initial conversion costs.

2) Why did the LDCs identify 177,000 on-main conversions as the potential? Why not 100% of the total on-main potential?

LDCs analysis indicates a total on-main potential of ~216,000 premises (residential, commercial and industrial). LDCs identified potential on-main targets by conducting an analysis of addresses that are within 150 feet of existing customers that are on-main. However the analysis is not granular enough to identify which type of fuel is used by those potential on-main customers. Majority of them will be using fuel-oil/propane, but an important number of those on-main potentials will also use electricity to heat their premises. The conversion from electricity to gas is more difficult and more expensive due to the lack of any of the mechanicals in the home to reuse.

Given that CT data indicates that ~15% of CT's residents/businesses heat their premises with electricity, LDCs assumed that the maximum penetration rate would be 85%. Further analysis on a county by county basis identified some further barriers for penetration that brought the potential number to 177,000 or 81% of the total potential of 216,000.

3) How fast could the LDCs do achieve the on-main conversion numbers?

In 2011, the LDCs converted ~10,000 customers given current paybacks in the ~6.25 years range (see table below). At the current rate, it would take the LDCs 17.7 years to convert the 177,000 on-main potential identified.

To develop an estimate of what was achievable in 10 years, LDCs assumed that an important level of incentives would be in place to support on-main conversions. In order to accelerate the current conversion rate, LDCs strongly believe that the customer payback in years needs to be reduced. For the assumption of 177,000 customers over 10 years (17,700 per year), LDCs assumed that the customer payback would be shortened to 3 years or less (see table below). To achieve a 3 year payback or less, LDCs assumed that a combination of rebates, tax credits and other tools would be available to incent customers to convert before the equipment reached its end of life. In addition, LDCs assumed that more flexibility around the hurdle rate model would be in place in order to reduce the number of customers where a CIAC payment would be triggered.

In addition, LDCs analysis indicates that probably the maximum capacity of the system would be reached if all 177,000 conversions were done in a 5 year period or 37,500 conversions per year. However to achieve that level of conversions, the LDCs believe the payback to customers will need to be zero. LDCs believe that both contractors would be able to ramp-up to meet this demand and that the key bottleneck would become the permitting process.

In order to select a number between 5 and 10 years, a clearer understanding of the level of incentives and the payback to customers would be required.

	177,000	177,000	177,000
Scenario	Aggressive	Proposed	Current
Years to reach 177,000	5 years	10 years	17.7 years
Customers/year	35,400	17,700	10,000
Assumed residential payback	0 years	3 years	6.25 years*

* Assuming $1,250 savings per year presented by LDCs

4) Characterization of off-main opportunities

LDCs want to emphasize that off-main expansion opportunities cover several customers at the same time, spanning the typical customer classes (residential, commercial and industrial). For example, SCG recently installed 15,000 feet of new main in the Town of Woodbridge, to service several anchor customers that included a high school, the town's facilities, a synagogue, a church and rectory. In addition the project passed 80 residential homes. In the LDCs analysis the cost of expansion would have served all these diverse customers.

Another example of a project would reach an area to with over 2 million square feet of retail, office and restaurant space as well as the potential for 180+ residential units. Future expansion would include 3 schools, a community center, a town complex and YMCA. Similarly the cost of expansion would serve all customers in this example.

In addition, different off-main expansion projects tend to have different cost profiles. For example, if several expansion projects are coordinated in a particular town during a particular time of the year, savings on costs can be achieved. Also several parts of the state are going to represent different challenges to lay new main. For the purposes of the analysis, LDCs made the simplifying assumption that the cost per foot of expansion was $195 in order to account for all the potential type of projects that could be undertaken to reach the 89,000 off-main potential customers.

LDCs strongly recommend that DEEP does not breakdown the off-main analysis into customer segments as it believes the NPV of customer savings would not accurately represent the actual economics of different types of off-main expansion projects.

5) Provide definition of industrial vs. commercial

Yankee Gas (as a proxy for LDCs) has the following different primary customer rate classes:

- Rate 1 – Residential non-heating
- Rate 2 – Residential heating firm service
- Rate 3 – Residential multi-dwelling unit service
- Rate 10 – Small general firm service (C&I with consumption less than 5,000 ccf a year)
- Rate 20 – Medium general firm service (C&I with consumption between 5,000 and 20,000 ccf a year)
- Rate 30 – Large general firm service (C&I with consumption above 20,000 ccf a year)

LDCs differentiate industrial customers if the SIC code falls in the 2000 to 3999 range or equivalent classification on the NAICS code.