P4P Existing Buildings:
Modeling/Reporting Fuel Switch Measures

In many cases we see projects that convert from oil/propane to natural gas heating, as well as electric to natural gas heating. In both instances the following should be done in the ERP in order to properly demonstrate these upgrades. There are two options:

Option #1:

<u>Table 1</u>: Annual Consumption (Column D) should only contain electricity and/or oil/propane baseline consumption values consistent with Portfolio Manager report, utility bills, and model calibration tool. The second box question should also be marked as <u>YES</u>.

		Annual Consumption*	Projected Savings	% Savings	Actual Savings
1)	Electricity (kBtu)	2,330,836	-13,297	-1%	0
	Natural Gas (kBtu)	0	-4,939,000	0%	0
2)	Fuel Oil (kBtu)	8,418,860	8,475,000	101%	0
3)	Source Energy Use Intensity (kBtu/ft^2)	168.0	34.6		0.0
	Source Energy Use Reduction			21%	0%

1) Is this project applying for ARRA incentives for Non-Investor Owned Utility? 2) **Or** is this project performing a fuel switch?	Yes

<u>Measure Simulation table & Table 14</u>: ECM #1 should be the first model run converting from oil/propane to natural gas. Table 14, Column L, should reflect ~100% oil/propane savings for this run while Column H should reflect the resulting gas increase (negative value). Remaining measure savings can be input as normal from subsequent model runs. The ERP Tables will then take the net savings between oil/propane and natural gas and generate the appropriate incentive.

	Measure Name	Installed Cost (incl. design)	Annual Energy Savings					
					Gas	Steam	Fuel Oil	Other
		$	kWh		MMBtu	MMBtu	MMBtu	MMBtu
	Oil to Gas Conversion	$20,000	0		-8,475	0	8,475	0
2	New Space Heating Boilers	$161,000	-5,785		2,039	0	0	0
3	New DHW Heaters	$62,000	0		480	0	0	0
4	Attic Insulation	$60,000	1,888		1,017	0	0	0
	CM Fees	$20,000	*Overall project management, all fees associated with speci*					
	Partner Fees	$18,200	*Per Partner Contract*					
	TOTALS	$341,200.00	-3,897		-4,939	0	8,475	0

Advanced Measure:					
CHP Unit	$0	0		0	

Note: CHP energy savings are not included in totals.

Option #2:

Table 1: Same as above

Measure Simulation table & Table 14: The fuel conversion can be lumped with the affected measure, such as shown below.

	Measure Name	Installed Cost (incl. design) $	Annual Energy Savings kWh	Gas MMBtu	Steam MMBtu	Fuel Oil MMBtu	Other MMBtu
1	Boiler replacement	$380,000	44,677	-6,396	0	8,057	
2	Reduced Infiltration	$20,000	1,630	1,572	0	0	0
3		$0	0	0	0	0	0
	CM Fees	$44,000	Overall project management, all fees associated with spec				
	Partner Fees	$18,847	Per Partner Contract				
	TOTALS	$462,847.00	46,307	-4,823	0	8,057	0

Advanced Measure:							
CHP Unit	$0	0	0				

Note: CHP energy savings are not included in totals.

Please see **Program Guidelines v3.0, Appendix A, Section A-2** for additional information.