Riding the Natural Gas Rollercoaster: Program Evaluation in the Face of Volatile Natural Gas Prices

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Volatile gas prices can have a considerable effect on DSM natural gas programs and all involved parties, including policy makers, program planners, utility program managers, implementation staff, customers, and evaluators. In some cases, measures cannot be consistently offered as they do not pass cost-effectiveness tests over multiple program planning cycles, making development of necessary program and market infrastructure difficult. The resulting lack of uniformity and consistency over time prevents programs from maturing and achieving their full potential. This issue has become important to evaluators responsible for measuring program impacts and cost-effectiveness, and for policy makers defining methods for measuring program success. Therefore, a vital question has been raised: Should utilities continue to implement natural gas programs that do not appear to be cost-effective in the short run due to a decrease in forecasted gas prices?

The Cadmus Group, Inc., faced this issue in 2010, while evaluating a portfolio of natural gas programs for a utility in the Midwest United States. The programs were designed using 2007 forecasts, when gas prices were considerably higher. Cost-benefit analyses for the evaluation were based on gas prices forecasted in 2010, when prices were low.

Our poster presents historic and current forecasted gas prices. Additionally, we show a comparison of two avoided cost forecasts developed in 2007 and three years later, in 2010. Finally, we illustrate the magnitude of difference between the avoided cost forecasts by presenting the results from two cost-benefit scenarios. The portfolio passes cost-benefit tests using the 2007 forecast, but it does not pass cost-benefit tests using the 2010 forecast.

As volatile gas prices can lead to fluctuating cost-benefit results, programs suffer through a start/stop cycle that prevents efficiencies from being realized and increases overall costs, further exacerbating the issue. In this poster, we explore several supplemental areas that should be examined by evaluators, utilities, and policy makers when assessing programs that do not initially pass cost-benefit tests due to volatile gas prices. Using the programs Cadmus evaluated as a case study, we assess: overall performance, utilizing indicators such as energy savings, participation, and overall impacts; and process evaluation findings, such as customer and trade ally satisfaction, and whether or not best practices have been used. Such assessment activities can lead to conclusions as to whether or not the utility should change its design or offerings in future program cycles.