



May 30, 2017

Lisa A. Skumatz, Ph.D Principal
Skumatz Economic Research Associates (SERA)
762 Eldorado Drive, Superior, CO 80027

**Re: Residential New Construction Program – Process Evaluation (R1602) Draft Report – UIL
Comments**

Dear Ms. Skumatz:

The United Illuminating Company (“UI”), Connecticut Natural Gas Corporation (“CNG”) and The Southern Connecticut Gas Company (“SCG”) (collectively the “Companies”), hereby submits the following comments on the “**Residential New Construction Program – Process Evaluation (“R1602”)**” Draft Report prepared by NMR Group, Inc., (“NMR”) dated May 12, 2017. The draft was submitted to the Companies on May 14, 2017, with a request for comments to be provided by May 30, 2017.

The purpose of the study was to perform a billing analysis, process evaluation, and baseline study for the Connecticut Residential New Construction (“RNC”) program. Collectively, these tasks are referred to as the R1602 study. The report dated May 12, 2017 includes the results of the process evaluation, while the baseline study and billing analysis will stand as two separate and forthcoming reports.

The following is the Companies’ comments on R1602’s conclusions and recommendations:

Conclusion 1: Overall design and design changes: Program staff and market actors’ feedback indicates that the program design is effective, well-received, and streamlined. Some trade allies worry that the program technical requirements may be too demanding; however, no single concern stood out. Trade allies appreciate the performance-based approach transition and have no strong feelings about the bonus incentives.

Recommendation 1: While program requirements intend to drive optimal savings, builders may need to be better informed about their purposes. It could be helpful to meet with active builders to discuss program requirements and communicate the science behind the requirements. Allow builders the opportunity to express their reasoning as to why they see certain requirements as unnecessary to potentially identify areas for leniency. Consider the option to require air-leakage testing of only a subset of multifamily housing units.

Companies’ Comments: The Companies are heavily involved with offering program information to builders throughout the state through partnerships with the two Connecticut HBRA chapters, Connecticut Chapter of American Institute of Architects, and National Association of the Remodeling Industry. If this recommendation is specific to the "Submission Requirements Checklist", please clarify the items of concern and the type of trainings recommended. The Companies do connect with HERS Raters on a regular basis to solicit their input/feedback on program requirements, and we see the value in also

soliciting builder feedback. In multifamily properties, "sampling" a percentage of units is currently allowed under program and RESNET guidelines as long as the HERS Rater is approved for sampling.

Conclusion 2: Program technical support: *HERS raters play a vital role in the execution of the program. The only real challenges they experience come from their interactions with builders whom they often find are either resistant to change or, more importantly, lacking the necessary skills to adequately air seal (either to meet program requirements or building code) newly constructed homes.*

Recommendation 2: *Continue applauding and acknowledging HERS raters' efforts to reinforce their commitment to the program. For example, send appreciation letters or acknowledge the high activity levels of the leading HERS raters in newsletters. Program staff should continue to provide commendable technical support, but trainings may need to be more thorough or intellectually accessible with a heavy focus on air-sealing techniques. Continue to coordinate these offerings with educational credit trainings to encourage builder attendance.*

Companies' Comments: The Companies currently offer code compliance training to ensure builders know about the changing codes in the state. The Companies have specifically offered training on 2012 International Energy Conservation Code (2012 IECC). The Companies appreciate the recommendation to provide additional air sealing training and will take this recommendation into consideration. The Companies will consider exploring ways to acknowledge HERS rates efforts to reinforce their participation in the program.

Conclusion 3: Application process: *While the participation process runs quite smoothly, especially at the pre-approval/initial application stage, there are some areas for improvement. Not unlike many RNC programs, HERS raters and participants experience some challenges with the submittal of the complete application, finding application paperwork to be redundant and excessive and resulting in too much back-and-forth communication with program staff.*

Recommendation 3: *Study program applications, possibly in collaboration with active HERS raters and/or builders, to identify areas of redundancy that could be eliminated. As time allows, engage less-experienced applicants after pre-approval to ensure that they understand exactly what materials are needed for the final application.*

Companies' Comments: The Companies appreciate the comments and suggestions from builders and HERS raters to improve the application process. The Companies will consider these recommendations in future application streamlining efforts.

Conclusion 4: Program data tracking: *The Companies' program staff faced hurdles in compiling data to support evaluation efforts. As NMR presented in a memo to the EEB on April 11, 2017, the evaluation team estimated spending an extensive number of hours that were unproductive and resulted solely from data issues related to the R1602 study. These issues largely supported the R1602 Billing Analysis and Baseline Study efforts and included incorrect data extractions, duplicate records, unclear unique identifiers to link projects across datasets, and inadequate site descriptions. Similarly, it appeared that lack of systematic data storage, such as disaggregated REM/rate files, led to missing files and unnecessarily burdened the Companies' program staff when they needed to compile the information to serve evaluation efforts. UI is currently revamping its program data tracking system, but Eversource, at the time of interview, was not. Energy generation data for renewable energy projects were not present in the billing data.*

Recommendation 4: *The program may wish to consult with database experts to structure the database to support program staff so they can easily interface with the database and to ensure completeness.*

1. Per the suggestion of one trade ally and program staff, examine the feasibility of shifting to an online application process which will lessen the burden on program staff to manually enter participation data in program tracking systems and help streamline the participant and HERS rater efforts.

2. The program should systematically name and populate REM/rate files. NMR's baseline study research team experts note that classifying the files' phases is essential. The Companies may find it useful to incorporate the project's phase (e.g., plans, post-construction, and final) into the file names. Similarly, separately storing the records by these construction phases would be helpful to ensure accurate tracking and facilitate evaluation efforts.

3. Also, confirm that energy generation is being tracked for program projects with renewable energy infrastructures to accurately capture all program impacts.

Companies' Comments:

1. Currently all application submission materials are transmitted via email to the Companies' Program Administrator. The Companies will explore the feasibility of creating an on-line application process when evaluating streamlining opportunities.
2. All REM/Rate files are stored electronically in a folder by project. All other completion documentation materials are also stored in the same folder by project. The Companies will consider adjusting file nomenclature, but see little value in this endeavor.
3. The Draft Report stated that participation data did not include the amount of energy PV systems generated. UI has information if it had been requested on kW of installed systems.

Conclusion 5: Awareness and communication: While program staff promote the program, such as at trade events, they do not engage in cooperative advertising efforts with trade professionals. Buyers of spec-built homes (i.e., homes that are purchased after they have been listed on the open market) are not overwhelmingly aware of the program. Homebuyers' reports show that they see value in program certification; in contrast, builders do not see a need to inform their customers that their homes participated in the program, perceiving that customers are disinterested in program details and relate more to energy bill savings. That said, builders believed that the program needs to increase brand recognition in the same vein as ENERGY STAR® to make it a relevant talking point. Customers who know about the program usually learn of it through their builders. Builders who highlight it use it as a third-party verification to prove energy efficiency.

Recommendation 5: Customer awareness can stimulate participation, especially through word-of-mouth channels. Awareness also increases the value of the program in the marketplace; in other words, when customers know what the program signifies, then real estate brokers and other trade allies can make assertions such as Other homes say they are energy efficient, but only program homes are verified as energy efficient.

> HERS raters saw this dynamic and stressed that educating real estate assessors and brokers on the value and distinction of the program is key; on that note, the program should continue its efforts to promote and explain the program at trade events.

> Providing builders with cooperative advertising materials that they can customize for their own businesses may encourage them to notify homebuyers that their homes are certified through the program. Further, the program may wish to develop a logo to enhance name recognition which could, in turn, act as a marketing tool for builders to effectively prove program verification on top of increasing customer awareness. These logos could be given to builders to place somewhere in the home (e.g., a decal to place on an entryway window) for potential homebuyers to see.

Companies' Comments: The Companies appreciate the Draft Report's recommendations for improved messaging and outreach to builders and homebuyers, as well as to real estate assessors and brokers, and agrees that customer awareness can stimulate participation and increase the value of the program in the

marketplace. The Companies will explore opportunities to enhance marketing and outreach efforts using existing and new tools and tactics as appropriate based on budgets.

Conclusion 6: Participation, attitudes, and demand: *Market actors are satisfied with the program overall, with HERS raters' performance leaving builders satisfied and the program's fueling of business leaving HERS raters satisfied. Homebuyers prioritize energy efficiency, yet it is not as important as the quality of construction and the opportunity to be involved in decision making when shopping for or building a new home. When it comes to participation hurdles, the amount of paperwork involved in the application may be daunting, and rebate issuance moves slowly. The incremental costs that builders incur to participate are negligible and are usually offset by the program rebates; in fact, builders see program rebates as a double bonus, offsetting the costs of building and funding their training to build energy-efficient homes. The program wants to leverage the growing multifamily new construction market in the state, which could increase the program's cost-effectiveness and increase total savings, but interviewees saw some obstacles.*

Recommendation 6: *Program outreach messaging toward builders should highlight the negligible incremental cost of participation and how it is offset by rebates that in the process grow their skills. The program's messaging toward potential homebuyers could highlight secondary benefits such as Drive your home's design by participating or Take hold of your home's construction process by participating. Per the suggestions of program staff and trade allies, program outreach and processes should attract multifamily builders, possibly by diminishing any redundancies in paperwork.*

Companies' Comments: The Companies appreciate the Draft Report's recommendations for improved messaging and outreach to homebuyers, and single and multifamily builders to highlight value. Specifically related to the multifamily market, approximately 75% of units served through the new construction program over the last few years are part of multifamily projects. The standard modelling software that is used for single family homes does not accommodate large multifamily projects, therefore more sophisticated energy modelling must be conducted. The Companies acknowledge that the paperwork and analysis for a multifamily project may be more extensive than for a single family project. The Companies will consider the recommendations to reduce paperwork redundancies in future streamlining efforts.

Conclusion 7: Program influence and relevance: *The program has been one essential factor in developing and growing the HERS rater market in Connecticut, yet factors such as ENERGY STAR, ZNE, and energy codes appear to be the initial drivers for some builders to seek a HERS rating—HERS raters will then direct these participants to the RNC program. In turn, HERS raters' activities perpetuate the program's enhancement of builders' energy-efficiency practices. Builders added that they have carried over the practices they learned during participation to their nonparticipating projects.*

Recommendation 7: *This evidence flags signs of program free ridership, spillover, and market effects; the evaluation team underscores the value of exploring this further. The EEB recently publicized a request for proposals for an RNC net-to-gross study which will provide a more accurate depiction of claimable savings. This study supports that decision.*

Companies' Comments: The Companies will await the results of the forthcoming RNC net-to-gross study before making any programmatic decisions related to free-ridership, spillover and market effects.

Conclusion 8: Measure persistence: *There is no concern that homeowners are removing major measures following participation.*

Recommendation 8: *None.*

Company's Comments: None.

Thank you for the opportunity to provide these comments.

Sincerely,

Patrick McDonnell
Senior Director of Conservation & Load Management