

Building Net-Zero Energy Homes: Lessons Learned

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ABSTRACT

Net-Zero Energy Homes (NZEH) are no longer a futuristic concept. Greenhill Contracting has constructed more than twenty-five NZEH's in the Mid-Hudson Valley of NY. This session will provide an overview of the design and engineering parameters, construction techniques, challenges, and lessons learned from the construction of these homes. The presentation will also provide a case study of eleven of the homes which have been occupied for as much as six years. The presenters will be sharing insights from their roles as a production builder and Energy Rater, including: a review of the design parameters, construction of high performance building enclosures, installation of ground-source heat pumps, incorporation of PV systems and navigating performance standards. Energy-use data monitoring will be presented as part of the session.

BIOGRAPHY

With over twenty years of professional experience in the housing sector, Pasquale has been dedicated to High Performance Building since 2004. As a building performance consultant and Energy Rater he has worked on over 1,000 homes including multi-family projects. A growing portion of his work is performing forensic investigations to help resolve building failures related to energy efficiency retrofits.

Anthony has been a builder since 1990. In 2007, he built the first DOE-Rated Net-Zero Energy Home in NY. Since then, he has built 25 additional Net-Zero Energy homes that have been designed and constructed for a life cycle of at least seven generations.