



# Case Study

## Beazer Homes: Zero Energy Ready



### PROJECT OVERVIEW

**PROJECT:**

ZERH Single-Family Homes

**BUILDER:**

Beazer Homes

**LOCATION:**

Nationwide

**GOAL:**

Achieve 1.5 ACH50 air leakage on several thousand single-family homes across multiple regions.

**RESULTS:**

Before AeroBarrier = 3-4 ACH50

After AeroBarrier = 1.5 ACH50

AeroBarrier is critical to Beazer Homes achieving ZERH certification reliably, consistently, and at production scale.

## Production Homebuilder Achieves Zero Energy Ready Homes

### Planning & Analysis Sets the Stage for Success

Beazer Homes is the first national builder to commit to achieving the US Department of Energy's Zero Energy Ready Home™ (ZERH) certification on every home they build and will achieve this by the end of 2025. They chose AeroBarrier as a critical solution to help them achieve the level of airtightness needed for the ZERH building envelope.

Building several thousand homes a year across 16 metropolitan areas to be ZERH certified is a very complex undertaking. Beazer Homes completed careful planning and analysis to determine how they could consistently achieve this level of performance. They considered every option and focused on what works well for a production builder – what is repeatable.

“We set the goal of reducing our homes’ energy use by about half to achieve ZERH,” said Jim Moore, SVP of Operations. This also reduces the amount of PV solar to be added in the future to achieve net zero energy. Since air leaks account for 25-40% of a home’s heating and cooling energy use<sup>1</sup>, Beazer had to solve air leakage to achieve ZERH and set the goal of consistently achieving a very low level of air leakage – at least 1.5 ACH50.



*AeroBarrier gives us a scalable solution – it's going to fill all of those holes, cracks, and crevices. We need to achieve a minimum of 1.5 ACH50. That's going to be pretty hard with caulk guns and tapes and stuff like that.*

*Jim Moore - SVP of Operations*

Beazer Homes

1. Energy Star Air Sealing Fact Sheet, 2005, energystar.gov





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*Within the realm of what we do as a production builder, we couldn't get to 1.5 ACH50 and ZERH without AeroBarrier.*

**Austin Ervin - Director of Purchasing**  
Beazer Homes Nashville



AeroBarrier was chosen as Beazer's air sealing solution for its proven ability to seal the building envelope to 1.5 ACH50 every time, verify that via a continuous blower door test, and repeat and scale that over thousands of single-family homes in different regions of the country.

### AeroBarrier a Critical Part of Beazer's ZERH Solution

AeroBarrier has become a critical part of Beazer's success in achieving ZERH for their single-family homes. This partnership enables them as a production builder to consistently achieve an air tightness of 1.5 ACH50 on every single-family home. AeroBarrier offers the reliability, cost, and speed Beazer needs to get the job done every time. This achievement has involved a strong working relationship with AeroSeal Envelope, its local installers, and Beazer staff in multiple locations.

AeroSeal Envelope staff and local installers such as Music City Air Barrier in Nashville, TN, have used their expertise to help Beazer Homes improve their overall air sealing practices. They identified areas in their models which are prone to leakage, determined how this leakage can be avoided, and established how far below 1.5 ACH50 AeroBarrier needed to seal. This allows for incremental leaks caused by work done after AeroBarrier is applied, guaranteeing that the required final air leakage will be achieved. AeroBarrier's installers have become the go to trade responsible for meeting air sealing requirements.

AeroBarrier also generates cost-savings. Like many builders, Beazer was flash foaming the attic-side of the drywall ceilings to meet air sealing requirements. Since using AeroBarrier, it can now eliminate this process, saving approximately \$1500 per house.

In addition to meeting ZERH requirements, air sealing also minimizes the chance for condensation to form inside the exterior wall. This improves the durability of the home, and eliminates the potential for mold growth. A tighter seal also means a quieter home, better indoor air quality, and less insect intrusion for homeowners.

While Beazer is already using AeroBarrier effectively and efficiently on a large scale, the two companies continue to learn how to achieve a final air leakage of 1.5 ACH50 more efficiently, simply, and at a lower cost. Beazer Homes is an example of how Zero Energy Ready Homes can be achieved profitably by a production builder, providing better quality homes to homebuyers across the country.



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