

Focus on Energy Residential New Construction Market Effects

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Energy efficiency programs with long histories of customer and market engagement can influence the market in ways that extend beyond direct program interactions. These market effects provide energy efficiency savings attributable to the program and can be quantified with rigorous analytical methods. Focus on Energy began quantifying its retail lighting program's market effects in the 2015-2018 quadrennial using national sales data and market trend information. In 2019, the Focus on Energy evaluation team expanded market effects research to the **Residential New Construction Offering**, and in 2020, it identified and quantified preliminary market effects for the offering.

Residential New Construction Market Effects

For 20 years, Focus on Energy has offered programs that engage with Wisconsin builders and encourage them to construct homes that are more efficient than homes built using standard building practices. Program representatives engage directly with builders and contractors during home construction to share their expertise about energy-efficient construction best practices.

To date, market effects research conducted by the evaluation team supports a theory that Focus on Energy's longstanding engagement with Wisconsin home builders has resulted in the adoption of energy-efficient home construction practices regardless of whether the homes are certified through the Focus on Energy program. Two key findings support this theory:

Focus on Energy's Residential New Construction Offering has increased the efficiency of construction features in nonprogram homes.

In 2020, the evaluation team assembled a panel of market experts—including builders, contractors, code officials, and residential new construction efficiency experts—to assess possible program market effects. After reviewing multiple data points about the Wisconsin new home market, program activity, new home consumption, and builder and contractor feedback, panelists agreed that specific building features would be less efficient in nonprogram homes if the Focus on Energy offering did not exist. These experts concluded that without Focus on Energy's influence on the new home construction market, nonprogram homes being built today would have lower insulation levels, higher outside air infiltration, less efficient heating and cooling systems, and lower amounts of efficient lighting.

Proximity to program homes appears to be a factor in nonprogram home energy consumption.

Statewide billing data for new homes shows that nonprogram homes constructed in zip codes with little to no program activity consume 8% more energy than nonprogram homes built in the same zip codes as program homes. Because contractors tend to work in concentrated areas, this geographic difference in consumption suggests that nonprogram homes built away from program homes do not benefit from the program's market effects drivers, such as contractors learning new skills from program representatives.

Additional energy savings from the market effects of the New Construction Offering

2,700 MMBtu per year



Enough to power
225 Wisconsin homes for a year

The additional savings are attributable to the program influencing the behavior of contractors and builders, even when they do not directly receive an incentive of certification through the program.

Further Research

While research to date supports the theory that market effects likely occur in proximity to program homes, additional research is needed to understand the program's influence in areas of the state that have seen less program activity and why new home energy consumption is higher in those areas. The evaluation team is planning a new homes baseline study in 2021 that will provide additional insight into this market. The team will report results from that study and additional market effects findings in Focus on Energy's **annual evaluation reports**.

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