

Below are the comments I provided at the Residential Code hearing on October 11th, 2019:

- My name is Andrew Dwyer, representing Owens Corning. I am speaking in support of the proposal submitted by Greg Keeler regarding a state-wide requirement of ice & water barrier on residential homes.
- I have been with Owens Corning for two years, both in the Insulation and Roofing businesses.
- My background is in Architecture, and I have experience in building science from Acoustics to my current role as Technical Service Specialist, where my responsibilities include building codes, test standards, and product testing & certification.
- I would like to speak briefly about what ice dams are, and how they cause damage to homes.
- Ice dams can occur in any climate where there are freezing temperatures
 - In residential construction, roofs are built with overhangs so that the bottom of the roof (eave) is not directly over conditioned space. As a result, this part of the roof is at a temperature and humidity that the rest of the roof is not.
 - When snow accumulates on a roof, it melts first above the conditioned space, where heat has risen from below.
 - Liquid water then flows down the roof to the eave, where there is no heat from below, and cools to the outside temperature, forming as ice. This ice accumulates as more snow from above melts, forming an “ice dam”
 - This ice dam can eventually cause liquid water to back up, and penetrate through the roof deck where fasteners are used to stall the roofing underlayment.
 - This damage is very costly to the homeowner.
 - **In areas without an ice barrier requirement, only a mechanically fastened underlayment is required. This is attached with nails or staples and sheds water, but is not water proof.**
 - **In contrast, ice and water barriers are self-adhering modified bitumen membranes – they are designed to not only be waterproof, but to seal around fastener penetrations from mechanically fastened underlayment above.**
 - This adds a layer of protection from liquid water penetration that nail on underlayment does not offer

- Currently the Indiana code requires protection from ice damage on homes in only 27 of its 92 counties.
 - However, the climate in the whole state of Indiana is conducive to the formation of ice dams, and therefore damage to Indiana homes at the cost of Indiana homeowners
- The upfront cost of an ice barrier added to a home is considerably cheaper than the cost of repair to a home with ice and water damage – from the insurance deductible to the inconvenience, it is an imminent threat to homeowners across the entire state.
- Even so, we are sensitive to the added upfront cost of requiring state-wide ice dam protection
 - Because of this, **the proposal from Mr. Keeler would not require as much ice & water barrier as states modeled after the IRC (such as Ohio) but would require only one 36” wide roll of Ice & water barrier on all residential roofs with overhangs less than or equal to 12 inches, regardless of slope.**
 - For roofs with overhangs greater than 12 inches, the requirement of ice barriers extending from the eave to 24 inches past the exterior wall would be **measured along the roof slope, NOT horizontally from the inside of the wall**, further reducing the amount of ice & water barrier necessary compared to codes based off of the IRC
- We believe **this addresses the root cause of ice damage** – the formation of ice at the eaves and the penetration of water into the roof deck and walls – **while avoiding unnecessary cost of materials to the rest of the roof** above the conditioned space.
- I strongly urge your approval. Thank you.

Respectfully,

Andrew J. Dwyer
 Technical Services Specialist
 Owens Corning Science & Technology, LLC
 740.321.5070
andrew.dwyer@owenscorning.com