



Insurance Institute for Business & Home Safety®

# FEMA Wind Retrofit Guide for Residential Buildings (P-804) and IBHS FORTIFIED Home

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**How P-804 and FORTIFIED Can Improve Hurricane Resistance for New and Existing Homes to Improve Community Resilience**

The Insurance Institute for Business & Home Safety (IBHS) and the Federal Emergency Management Agency (FEMA) are committed to helping individuals and communities build better when preparing for and recovering from a disaster. One way this can be achieved is by streamlining the process by which homeowners can receive FEMA grants to improve the wind resistance of their homes.

### **What has FEMA done to encourage hurricane-resistant home improvements?**

- In 2010, FEMA released its *Wind Retrofit Guide for Residential Buildings*, known more commonly as P-804 ([www.fema.gov/media-library/assets/documents/21082](http://www.fema.gov/media-library/assets/documents/21082)). The goal of P-804 is to encourage wind mitigation of existing residential buildings by providing both technical guidance and an overview of the process to apply for wind retrofit grant funds.
- In 2015, FEMA simplified and streamlined the process to obtain mitigation grants for P-804 projects by establishing the use of pre-calculated benefits, which can be used instead of the traditional Benefit/Cost Analysis (BCA) tool ([www.fema.gov/media-library-data/1424368115734-86cfbaeb456f7c1d57a05d3e8e08a4bd/FINAL\\_WindRetrofit\\_BCA\\_JobAid\\_13FEB15\\_508complete.pdf](http://www.fema.gov/media-library-data/1424368115734-86cfbaeb456f7c1d57a05d3e8e08a4bd/FINAL_WindRetrofit_BCA_JobAid_13FEB15_508complete.pdf)). This change is intended to expedite the application and grant approval processes to encourage stronger hurricane retrofit protection.

### **Why is it important to retrofit homes to protect against high winds, such as those generated by tropical storms and hurricanes?**

Windstorms, including hurricanes, are among the most destructive forces of nature, and account for eight of the ten most expensive disasters in U.S. history (six of these since 2000). High winds destroy buildings, devastate lives, and damage the physical and economic infrastructure of communities. Fortunately, research by IBHS, FEMA and other public and private sector experts has identified ways in which such damage can be reduced or prevented. This research led to the development of IBHS' FORTIFIED Home™ –Hurricane standard and FEMA's P-804 standard.

- FORTIFIED Home™ –Hurricane ([DisasterSafety.org/fortified/homeowners](http://DisasterSafety.org/fortified/homeowners)) is an engineering and building standard developed by IBHS that looks at the home as a system. The standard has three levels, each of which builds upon the other: **Bronze** (which focuses on the roof and attic vent systems); **Silver** (Bronze plus opening protection for doors and windows, strengthening gables, and strengthening attached structures); and **Gold** (Bronze/Silver plus creating a continuous load path to tie the home

- together, and strengthening chimneys). FORTIFIED Home–Hurricane also includes evaluation and inspection requirements to ensure the technical standards are properly implemented; once this is verified by an independent, third-party inspector, an appropriate FORTIFIED Home–Hurricane designation is awarded for homes that meet all associated requirements.
- FEMA’s P-804 prevents or reduces wind-related hurricane damage by incorporating the technical knowledge underpinning FORTIFIED Home–Hurricane. Like FORTIFIED Home, P-804 takes a systems-based approach, with three successive levels of protection—Basic, Intermediate, and Advanced—that correspond to FORTIFIED Bronze, Silver, and Gold levels. While P-804 recognizes the need for homeowners and local governments to work with professionals to evaluate and inspect homes, it does not include inspection requirements or a designation process.

### **How does the FEMA wind mitigation grant process work?**

Under its Hazard Mitigation Assistance (HMA) function, FEMA administers two grant programs that can fund residential wind retrofit projects meeting the P-804 (and by reference, the FORTIFIED Home) standard: the Pre-Disaster Mitigation (PDM) grant program, and the Hazard Mitigation Grant Program (HMGP). Grant requests under both of these programs are now eligible to use pre-calculated benefits, in lieu of a BCA, for hurricane retrofit projects that are consistent with P-804 Intermediate and Advanced protection packages.

While each program has specific dollar thresholds and process requirements, a very basic overview is as follows:

- PDM provides nationally competitive grants to states, territories, federally recognized Indian Tribal governments, and local governments for hazard mitigation planning and implementing mitigation projects *before* a disaster event. The goal is to reduce the likelihood of damage and the need for post-disaster rebuilding assistance.
- HMGP provides grants to states, territories, federally recognized Indian Tribal governments, local governments, and private nonprofit organizations in states that have experienced a major disaster declaration. The goal is to implement long-term hazard mitigation measures during the recovery process following a disaster to reduce loss of life and property damage in the future.
- Individual homeowners may not apply directly to FEMA. Eligible local governments apply through the state on their behalf. Once grants are awarded, FEMA generally can fund up to 75 percent of total eligible

project costs. The homeowner must provide a 25 percent match, which can derive from both cash and in-kind sources.

**How can applicants bypass the BCA requirement for P-804 qualifying projects?**

There are a few basic requirements for P-804 projects to bypass the BCA requirements in grant applications:

- Projects must be for retrofitting residential buildings—excluding manufactured homes—and must comply with FEMA P-804.
- The cost must be less than FEMA’s published maximum cost (i.e., pre-calculated benefits) thresholds for considering a wind retrofit project to be “cost-effective” and therefore exempt from the BCA process. FEMA developed the following thresholds for Intermediate and Advanced Protection projects. There are no pre-determined thresholds for Basic Protection projects; for these, a traditional BCA is required.

<b>Mitigation Package Type</b>	<b>Roof Replacement Project</b>	<b>Pre-Calculated Benefits</b>
Intermediate Protection	No	\$13,153.00
Intermediate Protection	Yes	\$24,920.00
Advanced Protection	No	\$40,252.00
Advanced Protection	Yes	\$52,018.00

- The home must be located in a coastal, 120 mph or greater wind speed zone (as determined by the ASCE 7-10 standard). FEMA has identified specific localities in 22 states and territories (including all coastal states from Texas to Massachusetts) that meet this geographic requirement ([www.fema.gov/media-library-data/1424368115734-86cfbaeb456f7c1d57a05d3e8e08a4bd/FINAL\\_WindRetrofit\\_BCA\\_JobAid\\_13FEB15\\_508complete.pdf](http://www.fema.gov/media-library-data/1424368115734-86cfbaeb456f7c1d57a05d3e8e08a4bd/FINAL_WindRetrofit_BCA_JobAid_13FEB15_508complete.pdf)).
- Eligible costs include inspection of the structure, determination of the appropriate mitigation package type, design of the retrofits, labor and materials, and construction/post-construction inspections and certifications.
- Even when using the pre-calculated benefits, applicants must still demonstrate that costs are necessary, reasonable, allowable and allocable.

## How can homeowners get started?

- As noted above, individual homeowners cannot apply for FEMA mitigation grants. However, they can work with nonprofit groups, local jurisdictions, or state agencies to develop grant applications that can be submitted by eligible state-level entities.
- Grant applications can package a large number of individual home retrofit proposals, as long as retrofits for each home meet requirements of one of the pre-approved packages (intermediate or advanced) specified in the P-804 standard and are within FEMA's pre-determined cost threshold.
- PDM grants are awarded based on an annual application cycle, whereas HMGP grants are tied to specific disaster declarations.
- Because it may take some time to put together a grant application involving multiple homeowners, potential applicants and sub-applicants should educate themselves now, so they fully understand the benefits of FORTIFIED and P-804, and how FEMA grants can help homeowners retrofit their homes to become more hurricane-resistant, which will lead to more resilient communities.

*The Insurance Institute for Business & Home Safety (IBHS) is an independent, nonprofit, scientific research and communications organization supported solely by property insurers and reinsurers. IBHS' building safety research leads to real-world solutions for home and business owners, helping to create more resilient communities.*