



Rebuild America Success Stories highlight partnerships working to improve communities by practicing energy awareness and investing in energy-saving measures.

- New Building Design
- Existing Building Improvement
- Operations and Maintenance
- Renewable Energy Technologies
- Financing Building Improvements



Arizona: Building Smart from the Start

Building Affordability into New Housing

The Arizona Department of Commerce Energy Office, the lead organization for Rebuild Arizona, is working with the state's Department of Housing to make low-to-moderate income housing more affordable through energy-efficiency building standards.

The Challenge

Through its Housing Tax Credit Program, the Arizona Department of Housing encourages developers to build affordable housing units throughout the state. Knowing that over 1,600 units of new housing would be built each year, the Arizona Department of Commerce Energy Office saw an opportunity to reduce energy use, making the housing more affordable for occupants. The challenge was to find a way to make the units more energy efficient before it was too late in the construction process to make changes or upgrades.

The Solution

To ensure that the new units would be built with energy efficiency in mind from the start, the Energy Office worked with the Department of Housing to modify the building requirements. The two state agencies revised the Housing Tax Credit Program rules so that energy standards, plan review and site inspections are required to receive the tax incentive.

To qualify for the tax credit, builders must follow the International Energy Conservation Code, along with other requirements, including high performance air-conditioning units, minimal air duct leakage and proper installation of insulation.

Using a grant from the U.S. Department of Energy's Rebuild America program, the Energy Office has designated an energy engineer from its staff to review plans and make site inspections for each housing project to ensure compliance with energy-efficiency standards.

Many builders submit their plans to the Energy Office before they apply for city building permits, to ensure their projects will pass the Housing Tax Credit Program's energy code. If there are problems with the design, the energy engineer makes recommendations and will even provide technical assistance during construction.

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Partnership Facts:

Name of Partnership:

Rebuild Arizona, led by the Arizona Department of Commerce Energy Office

Targeted Buildings:

Public & Multifamily Housing

Space Completed:

1.4 million square feet

Annual Energy Savings:

\$150,000

Amount Invested in Energy-Saving Measures:

\$352,000

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For more information about energy-saving technologies, visit the Business Partners section of the Rebuild America Web site: www.rebuild.gov or contact Rebuild America at: 252-459-4664.

After a development receives its certificate of occupancy, the energy engineer randomly selects a unit for an energy audit. If the unit does not meet the energy standard, the builder does not receive the tax credit.

It is estimated that the energy standards will save 1.49 million kWh of electricity, which translates to \$150,000 in annual energy cost savings. Collectively, the builders have already invested \$352,000 in energy-saving measures.

What the Future Holds

The Housing Tax Credit Program is ongoing, and the Arizona Department of Commerce Energy Office continues to offer its services including plan review, technical assistance and site inspection.

The Energy Office and Department of Housing are continuing their cooperative efforts by sponsoring free workshops - with Arizona Public Service Company and Tucson Electric Power Company - that address healthy housing and energy efficiency.

Key Energy Standards

- Housing units must comply with the International Energy Conservation Code
- Seasonal energy-efficiency rating (SEER) of 12 or higher for air conditioning
- Double-pane windows
- Combustible furnaces must be 85 percent efficient
- R-19 value insulation in walls, R-30 in ceilings
- Insulation must be in alignment with the air barrier
- Total air duct leakage shall be less than or equal to 5 percent of fan flow for each air distribution system (at high speed)

To learn more visit: www.eere.energy.gov.

A Strong Energy Portfolio for a Strong America

Energy efficiency and clean, renewable energy will mean a stronger economy, a cleaner environment, and greater energy independence for America. Working with a wide array of state, community, industry, and university partners, the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy invests in a diverse portfolio of energy technologies.

Rebuild America is a U.S. Department of Energy program that focuses on improving communities through energy-saving solutions.



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