

WELCOME

Taking action in your community

This best practices guide is part of a series produced by Building America. The guide book is a resource to help builders large and small build high-quality, energy-efficient homes that achieve 30% energy savings in space conditioning and water heating in the hot-dry and mixed-dry climates. The savings are in comparison with the 1993 *Model Energy Code*. The guide contains chapters for every member of the builder's team—from the manager to the site planner to the designers, site supervisors, the trades, and marketers. There is also a chapter for homeowners on how to use the book to provide help in selecting a new home or builder.

- **Homeowners** will find how energy-efficient homes package value, comfort, economy, durability, and performance. This chapter is a great introduction to energy-efficient home technologies and provides helpful checklists of what to look for when home shopping.
- **Managers** will learn why building energy-efficient homes makes business sense. They will find out how much consumers value energy efficiency and the quality that comes with it, and how their company can gain market advantage by building energy-efficient homes.
- **Marketers** will learn about great resources for selling energy-efficient homes, including getting plugged into the ENERGY STAR® nationally recognized branding program.
- **Site Planners** will discover the huge impact building orientation, landscaping, and shading can have on energy costs, plus learn tips on moisture management and pest control.
- **Designers** will learn about the systems approach to home design backed up by building science. They will get guidance on key building components for designing energy-efficient homes.
- **Site Supervisors** will get guidance on contract specifications, tips on scheduling and training, and handy checklists for quality assurance and commissioning inspections.
- **Trades** will find step-by-step, easy-to-follow illustrated instructions for adding key energy efficiency technologies.

The last chapter has case studies showing real-life examples of builders who are designing and constructing energy-efficient houses in the hot-dry and mixed-dry climate zones.

We designed this guidebook to be taken apart, passed around, and updated. Give the sections of the book to the right people in your organization. Pass on pieces to subcontractors to help them understand your objectives. Copy it as needed.

This first series of guides helps builders understand and implement the Building America process to reach 30% energy savings in space heating and cooling and water heating. Future guides will aim at even higher levels of efficiency based on the latest Building America research, giving builders the knowledge they need to build even more efficient and durable houses.

The practices in this book are intended for the hot-dry and mixed-dry climates. Visit www.buildingamerica.gov for information on handbooks covering other climate regions.

INTRODUCTION

Taking action in your community



HOMEOWNERS

Shopping for value, comfort, and quality



MANAGERS

Putting building science to work for your bottom line



MARKETERS

Energy efficiency delivers the value that customers demand



SITE PLANNERS & DEVELOPERS

Properly situated houses pay big dividends



DESIGNERS

Well-crafted designs capture benefits for builders, buyers, and business



SITE SUPERVISORS

Tools to help with project management



TRADES

Professional tips for fast and easy installation

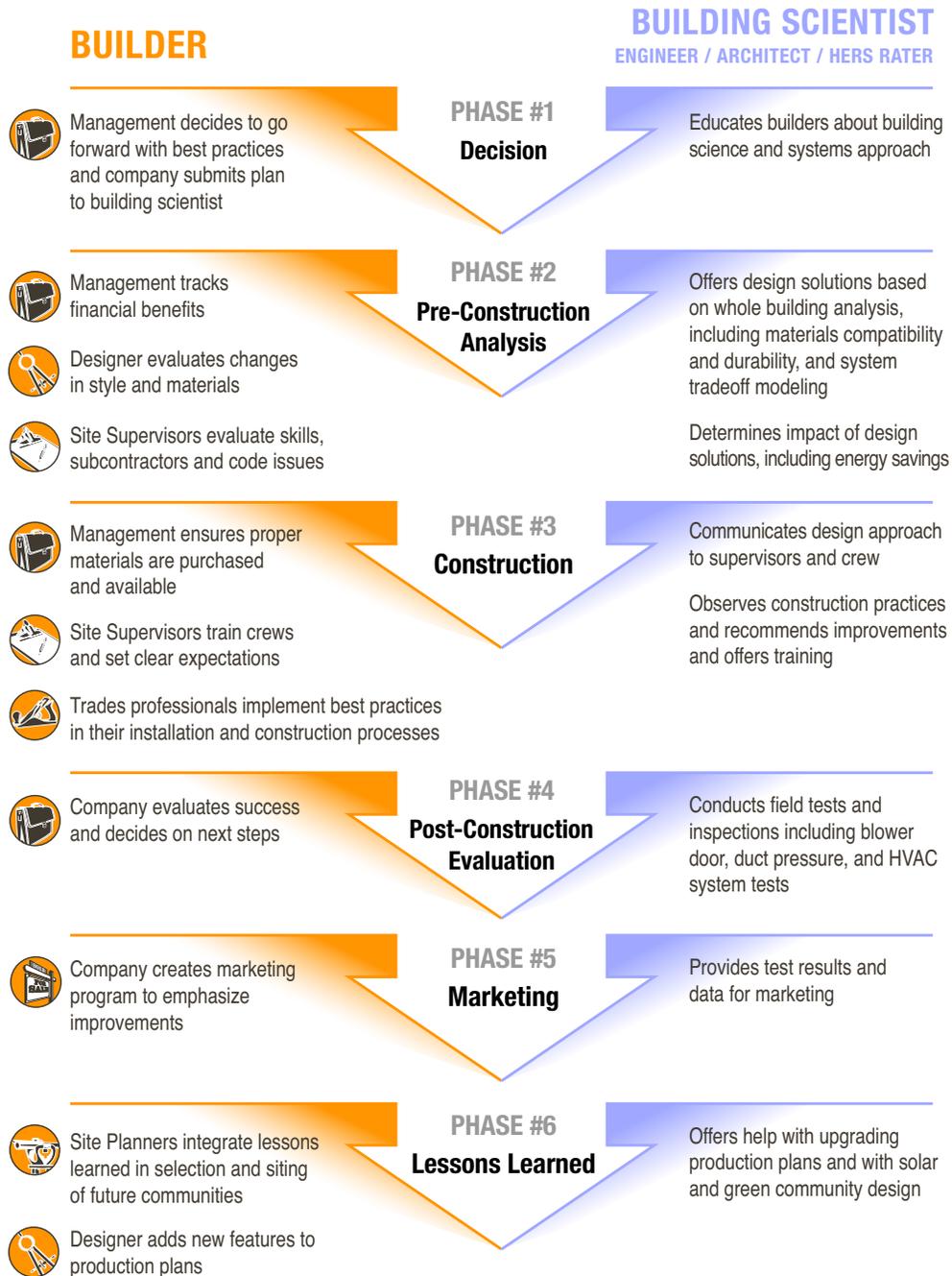
CASE STUDIES

Bringing it all together



INTRODUCTION

Many builders choose to try out Building America ideas in a prototype house. After building one or a few prototypes they decide what features they will carry forward into their regular construction. This chart shows a process for working with a Home Energy Rating System (HERS) rating professional, an engineer, or an architect to build this first house and on an ongoing basis. The person offering guidance could also be a company designer who has become familiar with this document or has taken other Building America training. An educated staff will be the best means of selecting building science support.



**Icons correspond with chapters and company capabilities*

Building America welcomes reader feedback on this second volume of the *Best Practices Series*. Please submit your comments via e-mail to: Michael Baechler (michael.baechler@pnl.gov) or Pat Love (lovepm@ornl.gov). You can learn more about Building America and download additional copies of this document at www.buildingamerica.gov.