

# ICC G4-2012

## GUIDELINE FOR COMMISSIONING



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## Foreword

An important yet underused path to energy savings, greenhouse gas emission reductions and overall building performance is through the *commissioning* of new buildings and the *retrocommissioning* of existing stock. In recent years commissioning has found its way into voluntary rating systems like LEED and, more recently, it has been included in the *International Green Construction Code*<sup>™</sup> (IgCC<sup>™</sup>) and CALGreen building codes, and standards such as ASHRAE 189.1, which is helping to move it into the mainstream of construction practices.

The term commissioning comes from ship builders that “commission” their ships to ensure that they are ready for service prior to the ships initial voyage and then are routinely inspected or “retrocommissioned” during their service life to maintain their performance. The commissioning of buildings initially focused on energy performance but now includes other building and site considerations such as mechanical, landscaping, acoustics, water use and air quality.

Many code officials have recognized the challenge and expressed concern over the enforcement of building commissioning since most code officials are not familiar with the process, as it has never been part of the building code. Recognizing the need for a guideline that addresses the various aspects of commissioning that will assist code officials in its implementation, ICC formed a committee with the task of developing such a guideline. The provisions of the guideline are intended to make enforcement simpler for code officials by clarifying the process and the use of approved agencies to perform and certify the commissioning of buildings.

The committee members that developed this guideline were industry experts and professionals from the design and enforcement communities. They recognize the importance of developing a guideline focused on commissioning as it pertains to enforcement and implementation and that encompasses the larger considerations that a building might need to improve and maintain higher performance levels.

Although it would seem that commissioning would be standard industry practice, in truth, buildings are rarely commissioned. Where buildings have been commissioned, the results are impressive. Case studies of large-scale commissioning efforts show positive energy savings and reasonable payback on the investment.

The authors of this guideline provided an extensive diversity of expertise and experience. The guideline was publicly vetted and the committee fully considered the numerous comments to make this a very comprehensive document. The guideline will provide a level of consistency that will assist the enforcement and design communities in the successful implementation of building commissioning.

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## Preface

### Introduction

The principal purpose of the ICC Guideline series is to provide a state-of-the-art volume of knowledge that will contribute to public health, safety and general welfare in the built environment. Guideline projects are established based on market relevancy, demand and the realization that existing technical information, regulations or standards, if any, do not adequately address the subject or that such existing technical information needs to be enhanced, clarified and made more user friendly. ICC Guidelines are in-depth, topic-specific technical publications that have global relevancy and may be used internationally. They are different from codes or standards in that they will generally use nonmandatory language.

Moreover, the committee addressed what it deemed essential processes such as the owner's project requirements and the basis of design. Given their significance to the commissioning process, the Committee felt it was appropriate and important to address them in this document.

### Development

Development of the ICC Guideline series was approved by the ICC Board of Directors in September 2008. ICC Policy GP 33-08 governs the development of ICC Guidelines and can be viewed on the ICC website at [www.iccsafe.org](http://www.iccsafe.org). ICC Guidelines are developed with the establishment of a Guideline Development Committee (GDC). The GDC is made up of a diverse stakeholder population and the participants are focused on ensuring high-quality and timely technical information for the built environment's usage. Upon the GDC reaching consensus, the final draft is posted for a "Public Comment" period for 30 days. The GDC considers all public comments, revises the public comment draft as appropriate and sends its recommendations to ICC for publication.

### Adoption

The *Guideline for Commissioning* is available for application and use around the world. Its use within a governmental entity or responsible agency is intended to be accomplished through adoption by reference in accordance with proceedings established by local laws, regulations and procedures. At the time of adoption, provisions requiring specific local information, such as the name of the adopting entity or agency should be inserted.

To accommodate the standardization of the *Guideline for Commissioning* into local law, the text passages of the guideline may need to be interpreted in a specific manner. Where definitive procedures are needed, mandatory language will become necessary and the following substitutions, definitions and rules can be applied to conform to definitive procedures with mandatory language.

- The words "may," "should," "could" and "can" are permissive in nature. Where defini-