



Focusing on The BOK: Energy, Utilities, and Environmental Stewardship

By Darryl Boyce

One of the most comprehensive and ambitious initiatives undertaken by APPA has been developed through the online Body of Knowledge (BOK). This online resource represents the most authoritative and up-to-date guide to the Arts and Sciences of Educational Facilities Management, available 24 hours a day, seven days a week. As an APPA member you can access this resource through an annual subscription, which also provides online access to every staff member of your institution! The current BOK builds on the foundation provided by the four-volume printed desk reference *Facilities Management: A Manual for Plant Administration*, which was last published in 1997. To learn more and to subscribe, visit www.appa.org/bok.

THE BOK: PART THREE

This article will focus on Part Three: Energy, Utilities, and Environmental Stewardship. This section is significant as it covers areas of responsibility not normally associated with traditional facilities management, but are a normal part of the management of educational facilities that usually involves the management of complex utility distribution systems similar to a small city.

The chapters within the Energy, Utilities, and Environmental Stewardship section are structured to support the operation of multiple facilities within a campus environment and are arranged in three sections: Energy Utilization and Environmental Stewardship, District Energy Systems, and Other Utilities.



THIS SECTION IS SIGNIFICANT AS IT COVERS AREAS OF RESPONSIBILITY NOT NORMALLY ASSOCIATED WITH TRADITIONAL FACILITIES MANAGEMENT...

Many of the chapters that were contained in the third edition have been completely rewritten. Significant changes have been made to the following chapters:

- Campus Utility System Master Planning, Domestic and Fire Protection Water Supply (replacing Water Supply and Distribution Systems)
- Sanitary Sewer and Stormwater Management (replacing Sewer and Storm Drain Systems)
- Data and Voice Network Infrastructure (replacing Telecommunication

Systems), Cooling Systems and Thermal Energy Storage (replacing Central Cooling Systems)

- Energy Supply Alternatives. The Electrical Distribution Systems chapter received some updates, and a new chapter titled Roadmap for Campus Environmental Sustainability was created to address the emphasis on sustainability and the reduction of energy use. A few chapters are still being worked on, and the new versions of those chapters will be online soon.

WHAT WE FACE TODAY


As part of the development of this latest version of the Body of Knowledge, we asked the authors to provide information on the application of current technologies, regulations, and issues that facilities management professionals are facing today.

An example is the development of the new chapter by Jiri Skopek and Walter Simpson, Roadmap for Campus Environmental Sustainability. This chapter provides a structure for the assessment of sustainable practices and energy use for a complete campus operation and also provides effective concepts to support the ongoing monitoring and identification of initiatives to improve the environmental impact of the campus. The chapter covers the topic through use of an action plan format from establishing senior management support, creating baseline, setting goals, implementing initiatives and finally monitoring results. The chapter includes examples of tools that assist in the documentation of the current state, opportunities for improvement and ongoing monitoring. This chapter also includes many Web links to other resources, and is sponsored by SRAPPA.

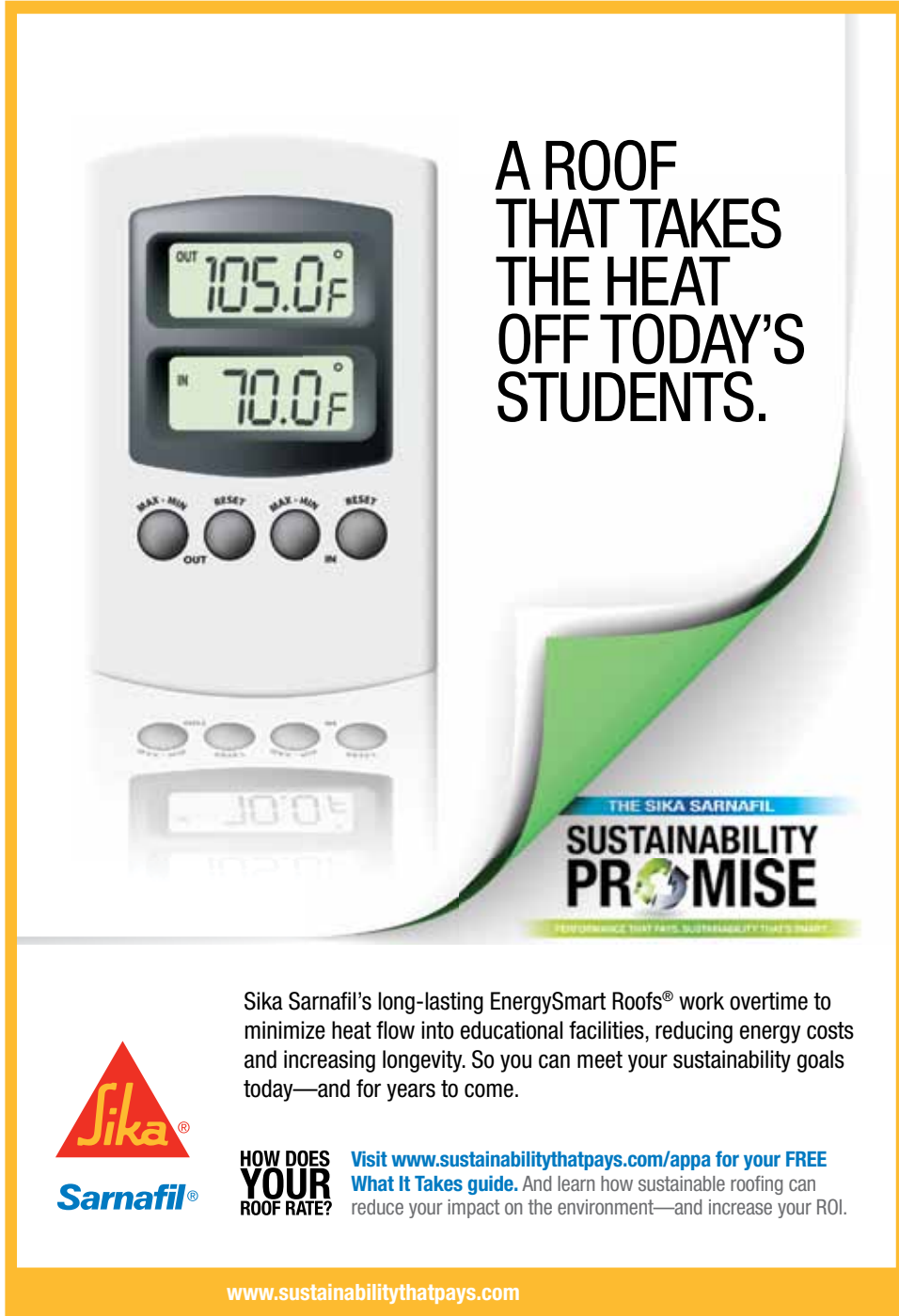
In the Data and Voice Network Infrastructure chapter, Denis Levesque has outlined strategies for the facilities management professionals to work with the information technology professionals to jointly provide effective information technology services to the campus community.

In the Campus Utility Systems Master Planning chapter, the authors provide a high level overview of the issues and approaches that should be considered when developing or expanding a campus utility system. You will learn why master planning is important, how utility master planning connects with the overall institutional master planning, what variables need to be considered during the planning process along with the funding implications.

In the Cooling Systems and Thermal Storage chapter, Kent Peterson walks us through the advantages and disadvantages of central cooling systems, including the fundamentals of central plant design covering refrigerants, chillers, prime movers, pumps, piping cooling towers and auxiliary equipment. The chapter also reviews the topics of

system design consideration, system performance operations and maintenance and thermal energy storage. 

Darryl Boyce is assistant vice president, facilities management and planning at Carleton University. He can be reached at darryl_boyce@carleton.ca. This is his first article for *Facilities Manager*.



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