

## Visualizing the whole picture:

### Virtual energy assessment technology finds potential energy savings in multifamily buildings without intrusion

Virtual energy assessment technologies can help operators of individual and portfolio multifamily buildings visually access energy use data and guide their decisions on energy efficiency improvements, all without disturbing residents. By monitoring trends in performance and prompting operators to take action before issues arise, these technologies enable the transition from reactive to more proactive building management.

These new virtual technologies are providing a more complete picture of energy performance in multifamily buildings for the first time. In many multifamily buildings, individual units are not metered and lease agreements and privacy concerns limit access to the units. So most building owners concentrate energy use assessments on common building areas, and spend little time understanding how individual tenants are using energy. Today's virtual energy assessment technologies can take existing energy use data, examine it through a variety of lenses including how much energy is being used when, identify anomalies in use patterns, and point building operators in the right direction for further investigation, diagnosis, and remedy planning.

## Putting technology to the test

The Smart Buildings Center's (SBC) technology demonstration and validation project researched nearly 70 technologies and reviewed eight during a 30-day deployment across 10 greater Seattle-area buildings. The technologies selected contained a mix of technical capabilities and had the ability to produce results within a short time period. The buildings that were chosen—in the multifamily, portfolio, government, and commercial sectors—already had results from a traditional audit, against which the new technology reports were compared.

For the multifamily category, the project team selected Bright Power's EnergyScoreCards as the virtual energy assessment technology and one of Plymouth Housing Group's downtown Seattle properties as the pilot building.

Bright Power's EnergyScoreCards product organizes building data in a subscription-based online platform specifically designed for ongoing management of multi-unit buildings. Capable of integrating with Energy Star® Portfolio Manager\* or pulling data directly from online utility accounts, EnergyScoreCards efficiently organizes building data and includes the services of an account-dedicated energy analyst.

## Technology deployments



*\*Portfolio Manager is a free online tool developed by the EPA to measure and track energy performance in buildings and portfolios, and benchmark their performance by comparing them with like buildings and portfolios on a regional scale.*

## Bright Power offers scoring, benchmarking, and insight

*“EnergyScoreCards gave us a quick, visual, point-in-time snapshot of which systems in one of our buildings might hold the greatest opportunity for efficiency improvements—especially for heating and electricity use—and will allow us to further target our investigation. We were especially impressed by the weather-normalized comparisons from year to year, which will help us accurately measure and benchmark performance over time.”*

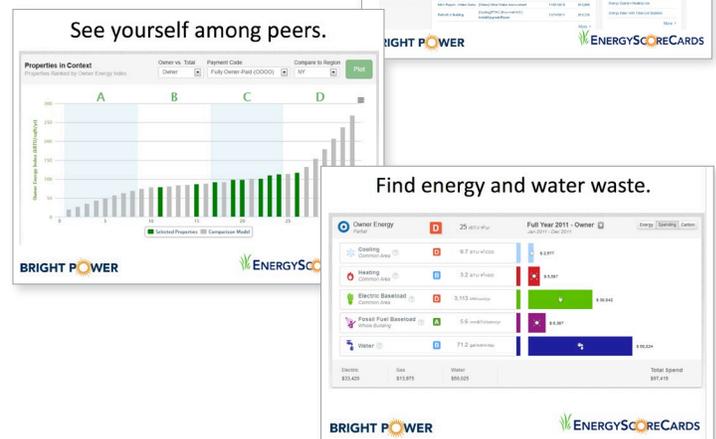
Kim Lokan, Director of Facilities,  
Plymouth Housing Group

The EnergyScoreCards “A” through “D” scoring system provides an objective and easily understood performance rating that prompts inquiry into effective improvement opportunities in common spaces and apartments. The “peer grading system” is based upon a proprietary database of more than 5,000 properties comprising over 15,000 multifamily buildings across the country that helps form a system comparison group. The final analysis provides an energy score for each individual system in a building—cooling, heating, electricity—by breaking down energy consumption of those systems and benchmarking against the comparison group. From that information the building operator can begin taking the first steps towards diagnosing

which systems or operations might warrant further investigation.

The flexible features of EnergyScoreCards are uniquely tailored to the multifamily sector, allowing users to define and compare unique patterns, like whether energy consumption varies according to who pays the utility bills: the owner or the residents?

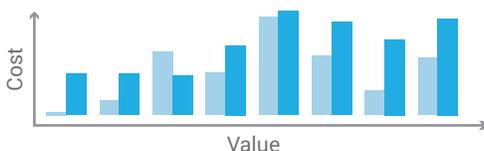
An EnergyScoreCards subscription offers the ability to track system performance over time; if upgrades are made, clear trend lines will indicate whether energy use has decreased. A subscription also comes with an account-dedicated analyst who can do everything from helping to set up the account to assessing how to proceed with deeper investigation of the most valuable energy efficiency improvements.



## WegoWise provides low-cost performance for smaller buildings

Most technologies come with a price tag, and price tags need justification. Even the free technologies require staff time to setup and interpret results, occasionally more so than fee-based technologies such as EnergyScoreCards, which tend to offer dedicated customer support.

Plymouth Housing Group’s Kim Lokan was already fully on board with using technology to understand and improve



building performance at a low cost, but she was also interested in finding ways to fine-tune how she allocates technology investment resources. Prior to using EnergyScoreCards, she had recently completed a full-portfolio deployment of a technology tool called WegoWise, which pulls data directly from online utility accounts every month and organizes that data online in a visually insightful way. WegoWise has a current client database of 29,000 buildings at over 8,000 properties. Similar results from the two tools—WegoWise and EnergyScoreCards—increased Lokan’s confidence in the findings, and armed her with the information she needed to propose further investigation into energy-saving strategies.

Lokan came to this conclusion: The more in-depth analysis from Bright Power's EnergyScoreCards would be money well-spent in buildings that have complex problems needing complex solutions, while those buildings that are

less complex or are already performing relatively well would benefit sufficiently from the more modestly-priced WegoWise.

## Multifamily buildings uniquely suited to benefit from new technologies

The SBC technology demonstration and validation project clarified what virtual energy assessment technology can and cannot do to maximize both technical and human resources and improve energy efficiency in buildings. While these new technologies are not yet a drop-in replacement for in-depth site audits, they can save time and money upfront by accessing and organizing data, conducting initial analyses, and identifying where to focus next-step energy-saving investigations.

These virtual technologies also provide reports that are ideal for engaging building staff, occupants, and financial decision makers in energy conservation planning and implementation. In the case of multifamily properties, where operators have far less control over how energy is consumed inside individual living units, the visual and easy-to-interpret reports provided by virtual technologies help engage building staff and residents in building

energy conservation strategizing and activities. Over time, new technologies also have the potential to proactively manage building performance and validate the success of energy efficiency projects.



### For more information



[www.smartbuildingscenter.org](http://www.smartbuildingscenter.org)

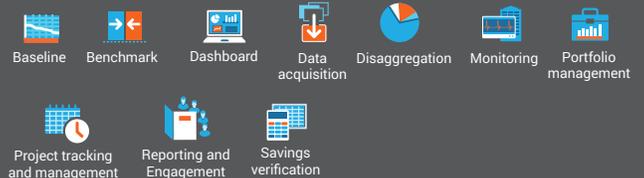
For guidance on how to identify the best virtual energy assessment tools for you, please see the Emerging Technologies guide on the SBC website, along with other project resources including a Market Snapshot analysis and case studies for commercial buildings, portfolios, and government and other public buildings.

**Bright Power EnergyScoreCards:**  
[www.brightpower.com/energyscorecards](http://www.brightpower.com/energyscorecards)

**WegoWise:** [www.wegowise.com](http://www.wegowise.com)

### Technology capabilities

**ENERGYSCORECARDS**



**ENERGY STAR® PortfolioManager®**



**FirstView®**



**wegowise**

