



# Providence Healthcare

## Regional Medical Center Everett

### Surgery Air-Handler Setback Program

Case Study  
April 2013

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## Project Overview

The operating rooms at Providence Regional Medical Center Everett (PRMCE) save lives every day, but what if they could save energy too? Operating rooms require large amounts of clean air that must be heated and cooled. Traditionally this conditioned air is supplied to the operating room all day, every day, consuming energy even when the rooms were not in use.

PRMCE utilized ATS Automation and SkySpark® analytics to find a solution and prove that it saved dollars. Today, staff press a button after the operating room (OR) is cleaned at the end of the day. This signals for less air to be sent to that operating room until the room automatically restarts the next day. This OR Setback Program conserves energy, saving resources that can be used to save lives.

## Year One Goals

### This project will save:

- \$12,380 in avoided energy costs.
- 134,186 pounds of carbon emissions.
- 863,927 kBtu of energy conserved.
- 1.6 Billion ft<sup>3</sup> less air moved through ORs

### That's equivalent to...



Planting 13 acres  
of pine forest.



141 barrels  
of oil offset.

*“With SkySpark we can see how the building systems are performing. When there is a fault, we find a solution and make changes. With ATS, we can spend our time actually saving energy and getting results.”*

*-Bud McIrvine, Biomedical and Facilities Engineering Manager, PRMCE*

## The Program

The setback program has been in place since April 2013. Since that time, these busy operating rooms have been able to set back for an average three hours per day. That small window has added up to 5,714 operating room hours so far! With dedicated staff and efficient equipment, this program is on track to exceed expectations.

### Savings targeted by energy analytics:

- Reducing Unoccupied Airflow
- Optimizing heating and cooling systems
- Improved scheduling of HVAC equipment
- Reducing equipment run times

## Conservation at Providence

The OR Setback Program is the most recent effort in a tradition of environmental stewardship. Providence Healthcare and Services has been recognized for their efforts with certifications and awards from the EPA, the Green Building Council and Practice Greenhealth. As a leader in efficient healthcare construction and operation, Providence is looking to the future. The same SkySpark data analytics used for the OR Setback Program are being applied to other systems throughout the hospital to uncover more energy savings.

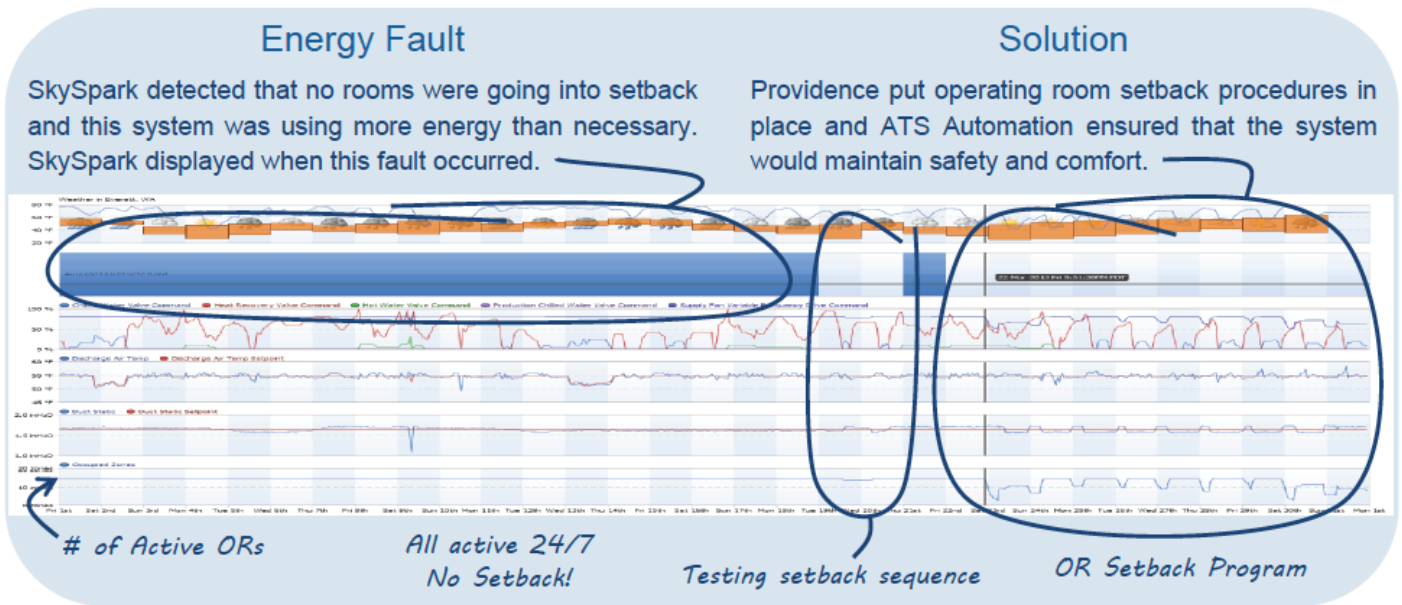
## SkySpark's Role

SkySpark is a powerful software tool that aggregates, visualizes, and analyzes building data to give a clear picture of where energy is being used, and can be saved. The healthcare facilities team at PRMCE and the energy experts at ATS Automation use this tool to see how the hospital is performing, find opportunities for improved efficiency, and then track the results.

The Everett Regional Medical Center was built to be efficient. Does that mean that it is running efficiently today? Now by using energy analytics, Providence Health Services is ensuring that this facility maintains and exceeds the high level of performance it was designed to achieve.

## Energy Analytics

A hospital's mechanical systems can be trended to provide data—a lot of data—to show how the system is performing. ATS Automation utilizes SkySpark to analyze all of that data. Working with the PRMCE facilities team, ATS Automation developed rules that automatically detect when the system falls below peak performance. These rules are constantly checking thousands of data points in the building automation system. The graph below shows the points associated with one of the operating room air handlers, and how the OR Setback Program came about.

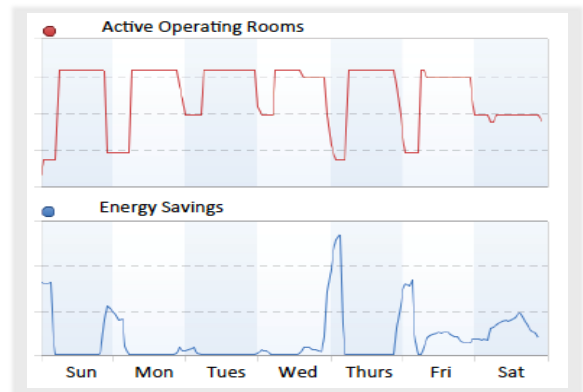


## Results

SkySpark has been monitoring the program and it is working as expected. The operating rooms are setting back when it is safe to do so and less air is needed. The fans slow down and use less energy on the inactive rooms while heating and cooling the active operating rooms, meeting Providence's high standards for safety and comfort. In the SkySpark graphs to the right, you can see a one-week snapshot of how the OR setback program is doing. The top graph shows how many operating rooms are active and the lower graph demonstrates how much energy is being saved.

## Results (con't)

In the SkySpark graphs to the right, you can see a one week snapshot of how the OR setback program is doing. The top graph shows how many operating rooms are active and the lower graph demonstrates how much energy is being saved.



## About ATS

ATS, established in 1986, specializes in engineering and installing Building Automation Systems controls for mechanical and electrical systems, allowing owners to reduce energy consumption and maximize effectiveness of facilities management personnel. Contact your local ATS representative to find out how you can start running your building more efficiently and economically. Learn more at <https://www.atsinc.org/> or <https://skyfoundry.com/>



## SkySpark® – Analytics for a World of Smart Device Data

The past decade has seen dramatic advances in automation systems and smart devices. From IP connected systems using a variety of standard protocols, to support for web services and xml data schemas, it is now possible to get the data produced by the wide range of devices found in today's buildings and equipment systems.

Access to this data opens up new opportunities for the creation of value-added services to help businesses reduce energy consumption and cost and to identify opportunities to enhance operations through improved control, and replacement or repair of capital equipment. Access to the data is just the first step in that journey, however. The new challenge is how to manage and derive value from the exploding amount of data available from these smart and connected devices. SkyFoundry SkySpark directly addresses this challenge.

### About SkyFoundry

SkyFoundry's mission is to provide software solutions for the "Internet of Things". Areas of focus include:

- Building automation and facility management
- Energy management, utility data analytics
- Remote device and equipment monitoring
- Asset management

SkyFoundry's software helps customers derive value from their investments in smart systems. Learn more and request a demonstration at [www.skyfoundry.com](http://www.skyfoundry.com).



The new frontier is to efficiently manage and analyze data to **find what matters™**.

# SkyFoundry

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