



## Lifespan Case Study

Collaboration drives significant energy and non-energy benefits



**Lifespan is always on the lookout for energy improvements.**

With four major hospital campuses, multiple offsite facilities (ambulatory care, MRI buildings, offices) and buildings ranging in age and size, Lifespan was facing many energy efficiency challenges in identifying and prioritizing projects that would be suitable for its overall strategic energy management plan.

### Collaborative Process

National Grid approached Lifespan to help examine energy savings solutions. This was based on a multi-year examination of opportunities that would support the growth of the hospital in an efficient, asset management-driven process. **When individual projects were considered holistically as part of an overall strategic energy management plan, the puzzle pieces fit and served as a catalyst for National Grid and Lifespan to move forward together.**

Along with National Grid, **B2Q Engineering** was instrumental in making this project a reality through **technical assessment studies**. Using these studies and Lifespan's in-house design capabilities, they developed a cost-feasible plan that took into account project risk, available capital and the financial payback period.

### Invisible Yet Invaluable

With ten project groups, each with multiple measures across Lifespan campuses, the behind-the-scenes improvements were the real game changers. **These largely invisible upgrades included, but were not limited to:**

- Implementing and optimizing outside air reset control
- Repairing non-functioning economizers
- Reducing air handling unit (AHU) fan speed during unoccupied hours
- Installing or repairing variable-frequency drives (VFDs) for fans and pumps
- Tying HVAC systems into the building management system (BMS)

*"The project was successful, the energy savings are great and all disciplines worked together to achieve scale. These upgrades also aligned with our commitment to environmental stewardship."  
- Thomas Magliocchetti, Vice President, Facilities Services*

These upgrades allowed for **greater command over critical systems**, such as heating and cooling, resulting in improved energy efficiency. In addition, controls that monitored temperature and fan speed translated into non-energy benefits, notably greater patient comfort.

Part of this project also consisted of a significant lighting upgrade to all of Lifespan's campus facilities, including parking lots. Among the non-energy benefits, the project produced a positive change for patients, visitors and staff. Doctors and other hospital employees immediately remarked about the brighter lighting throughout the hospital campuses.

These improvements strengthened the efficiency of Lifespan's basic operating systems. At the heart of the strategic energy management plan, this comprehensive project provided a cost-feasible approach that considered project risk, available capital and financial payback. When all the individual projects were bundled together, the result proved to be an attractive return on investment.

### Improvements Abound in an Environment of Care

There are many ways Lifespan's upgrades have benefited patients, staff and visitors.



**Greater cooling capacity enables a more comfortable environment.**



**More even temperatures and lighting levels improve the sense of well-being.**



**The lighting upgrades create better visibility and ambience.**



**The new integrated BMS has the ability to efficiently regulate system functions while reducing the health system's overall operating costs and environmental impact.**

### How National Grid and Lifespan Made This Happen Together

Of all the projects recommended, Lifespan went forward with 60% of the projects initially. **National Grid was able to provide Lifespan with generous financial incentives through its Strategic Energy Management Plan (SEMP) initiative** which helped offset a significant portion of the equipment and installation costs. The combination of these incentives and an attractive on-bill financing option helped Lifespan secure the necessary capital to invest deeply in energy efficiency and patient care, while also reaching an attractive return on investment for the hospitals.

*Lifespan achieved 8 to 10 percent in savings. This equates to roughly \$1.4 million annually.*

When asked if companies should consider National Grid for their future projects, a representative from Lifespan said, *"I would highly recommend this thoughtful approach for energy planning and environmental stewardship. The energy savings are great, and all disciplines worked together to achieve scale."*

After the success of their last project, Lifespan is working with National Grid again to enable implementation of the remaining projects. The collaborative partnership between Lifespan, National Grid, and B2Q Engineering made this a **rewarding endeavor, benefiting Lifespan's patients, visitors, employees and finances.**

**With a team of technical experts, financial incentives to drive down capital costs, and resources to help you every step of the way, there's no better way to achieve the scale required to improve energy efficiency.**

Ready to take the first step? Contact National Grid:

Call: **1-855-236-7052**

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