

# Infosys: Daylight Hour In Daylit Buildings

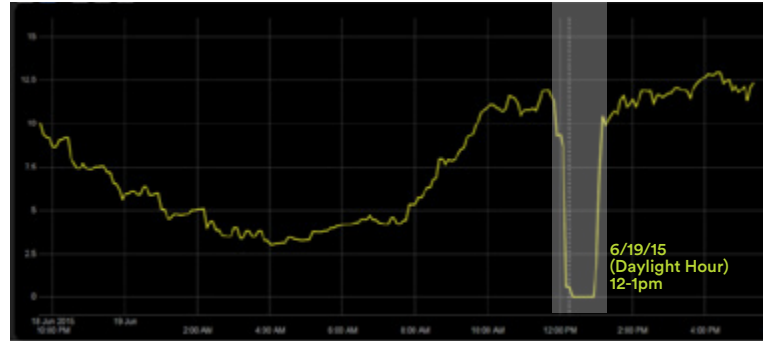
Turning the lights off in daylit spaces for just one hour allowed Infosys to reduce its energy demand by nearly 4%, saving 1,500 kWh of energy

# primary energy figures

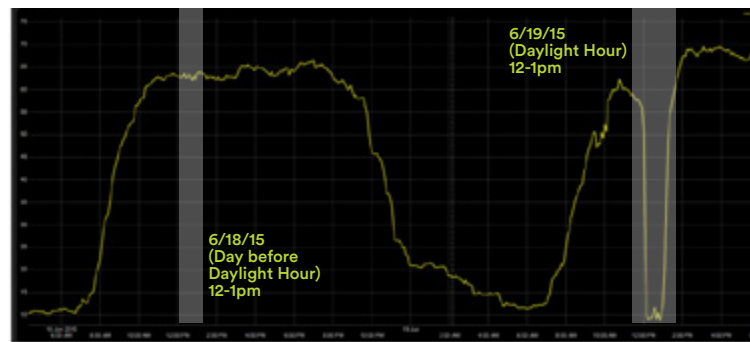
Daylight Hour energy savings:  
3.6%

kWh saved:  
1,500 kWh

Location	kWh Saved
Bangalore	585
Pune-Phase1	26
Pune-Phase2	138
Bhubaneswar	53
Chennai-Shols	49
Chennai-Mcity	337
Hyderabad-SEZ	52
Trivandrum	16
Mangalore-Mangala	13
Chandigarh	50
Hyderabad-STP	158
Mysore	41
Mangalore-Nethra	14
<b>Total</b>	<b>1,533</b>



M&C Building, Bangalore  
Significant drop in building lighting energy use during Daylight Hour



SDB 7, Chennai  
Significant drop in lighting energy use during Daylight Hour

## Infosys building strategies

- Efficient building envelope
- Insulated walls and roof
- Optimized window to wall ratio
- High performance glazing

- Daylight panes & vision panes
- Light shelves
- LED lighting
- Occupancy & motion sensors

## benefits

- Maximizes use of daylight
- Increases lighting efficiency

- Overall energy consumption reduction
- Increases occupant comfort and well being

## project description

Infosys, a global company based in India, was one of the 312 offices to participate in BEE's 2015 Daylight Hour campaign. Infosys strives to raise awareness about the profound implications of daylighting on health, productivity, and the environment, and also to inculcate a culture where people are sensitive toward the grave environmental challenges we face. Infosys worked hard to ensure that Daylight Hour was a success, engaging their employees and closely tracking the impact of Daylight Hour on lighting energy consumption.

## summary

Infosys' participation in Daylight Hour was extremely successful - saving money, conserving energy, and raising awareness among employees about the availability of daylight in their office spaces. Infosys' commitment to daylighting is apparent in the design of its buildings and its effort to engage employees in energy-saving initiatives.

Infosys offers business consulting, information technology, software engineering, and outsourcing services. Despite already being at the forefront of green building, Infosys achieved an additional 3.6% savings by organizing the participation of their 150,000+ employees in the 2015 Daylight Hour, turning down the lights in daylit spaces across 11 of their campuses in India. Daylight Hour is the Building Energy Exchange's (BEE) annual social media campaign, designed to raise awareness about the availability of daylight by encouraging offices around the world to turn down their lights for one hour.

Environmental impact and sustainability are a major priority for Infosys, significantly altering how they do business. They have recognized the formidable challenges that climate change poses to the global economy, and are striving to make their business operations sustainable and efficient, leaving a positive impact on the environment and society at large. In addition to implementing efficient technology and practices, Infosys has a strong record of working to change the mindsets of their employees and the larger community. Daylight Hour fits neatly within this overall

agenda, and they were able to engage many of their campuses. Through the Daylight Hour, Infosys raised awareness among their employees about the significant implications of daylighting on health, productivity, and environmental stewardship. Through consistent correspondence, Infosys leveraged Daylight Hour to foster a conversation that educated their employees while supporting their existing culture of sensitivity toward the grave environmental issues we are facing today.

Daylight Hour was an overwhelming success at Infosys, saving 1533 kWh energy over just one hour.

## building features

Infosys designs and retrofits its buildings with sustainability in mind. Infosys buildings feature technology that limits the need for artificial lighting and optimizes the consumption of artificial lighting.

Buildings are the largest consumers of energy in India, accounting for approximately 40% of total energy consumption. And the share of energy consumed by commercial buildings is only expected to increase as the country continues its rapid rate of development and industry growth. Therefore, it is pivotal to adopt sustainable design practices that minimize energy use, and provide a healthy indoor environment for occupants, including daylit office spaces. Infosys' approach to daylighting revolves around four integrated strategies: 1) reducing the need

for artificial lighting by harnessing daylight; 2) optimizing efficiency of artificial lighting; 3) monitoring energy use on a continuous basis; and 4) educating building occupants about system operations and the environmental and financial need to monitor them.

With these strategies in hand, Infosys designs its new buildings to achieve significant energy use reduction. Their buildings have efficient envelopes with insulated walls and roofs, appropriate north-south orientation, optimized window to wall ratios, narrow floor plates, high performance glazing, and adequate shading. These features, as well as the sophisticated window design described in the following paragraph, enable maximum interior daylight, minimum glare, and appropriate heat gain throughout the year. These features provide natural and healthy work environments for employees.

Successfully utilizing daylight allowed Infosys to minimize energy use and costs during Daylight Hour, while maintaining a comfortable work environment. Interventions that ensure work spaces are daylit and allowed for the success of Daylight hour include daylight panes, vision panes, light shelves, and other shading devices that allow in a substantial amount of natural light with little or no glare. Light shelves are overhangs that extend outside and inside the building between the vision and daylight panes of the window. They are designed to reflect daylight deep into a building. When sunlight falls on light shelves, it is reflected inward and upward. This limits glare and redirects sunlight to the ceiling where it spreads out evenly, reducing the need for overhead lights and providing the sort of indirect lighting that produces the most comfortable interiors. To maximize the utility of the light shelves, the window is split into two kinds of high performance glass. The glazing above the shelves, on the daylight panel, has a higher visible transmittance than the glazing below, on the vision pane. The high transmittance of the upper panes allows maximum daylight to hit the light shelves and enter the room. The lower glass, which is at eye-level, provides access to outside views and protects from glare. These interventions create a comfortable and healthy work environment that modulates with the character and intensity of daylight throughout each day.

In addition to minimizing the need for artificial lighting in their office spaces, Infosys optimizes the consumption of artificial lighting with the use of efficient lighting designs. This includes LED light fixtures, daylight dimming sensors, occupancy sensors, and advanced control systems.



Light shelves at an Infosys office

## process & challenges

**Infosys' participation in Daylight Hour required integrated communication across 11 campuses serving more than 150,000 staff and employees.**

Infosys worked extensively to engage its employees for the Daylight Hour. They began by disseminating information internally through various media, such as mailers, internal radio announcements, and the online employee portal. The communications highlighted the positive impact of daylighting on health, productivity, and the environment. In addition to this educational campaign, Infosys coordinated their facilities department, their Infrastructure & Green Initiatives team, and their voluntary eco-clubs across all locations to carry out the campaign successfully. During Daylight Hour, volunteers from the eco-clubs were stationed on every floor of each building, and were responsible for communicating the significance of the campaign to employees and ensuring that lights were turned off. Perhaps most importantly, Infosys has continued these measures beyond Daylight Hour, instituting a culture in which it is the norm to keep lights off when there is sufficient daylight.

As expected, there was some skepticism surrounding Infosys' participation in Daylight Hour. Some employees were ambivalent, as they were afraid that turning off the lights might inhibit their work or be an inconvenience. Those who were not swayed by the outreach and education were asked to take the small step of simply turning their lights off when leaving the office for lunch.

Daylight Hour was a vehicle for the community to connect with a tangible example of building energy use and to lead them to consider other ways to lower their carbon footprint. Infosys' participation in Daylight Hour demonstrates that with proper preparation, commitment, and leadership, this initiative has the power to minimize energy use substantially, educate the public, and spark a cultural change in a community.

## performance benefits & savings

**Infosys carefully tracked the savings achieved during Daylight Hour.**

Given Infosys' focus on data, it should not come as a surprise that throughout Daylight Hour, experts at Infosys' Bangalore office monitored the lighting energy consumption of participating buildings from their central command center. System level sub-metering allowed Infosys to monitor the impact of the campaign in real time and witness lighting energy consumption drop drastically during Daylight Hour. Nearly a 4% savings in energy (over 1,500 kWh) was achieved in just one hour. This was a clear example of the power of monitoring and management to reduce energy use even in very efficient buildings.



Central Command Center in Bangalore  
Remotely monitoring lighting energy use during Daylight Hour

## conclusion

**Daylight Hour's impact on Infosys was significant, reverberating well beyond a single hour.**

The benefits of day-lit offices on energy use, environmental impact, occupant health, and comfort should not be underestimated. Raising awareness through internal communications and coordination between multiple teams was instrumental in making Daylight Hour a success at Infosys. They utilized the initiative to save money and energy and to educate their employees about the power of daylight. Perhaps more importantly,



Visit [daylighthour.org](http://daylighthour.org) to learn more about the initiative.  
Join the movement.  
[#daylighthour](https://twitter.com/daylighthour)

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The **building energy exchange** connects the New York real estate and design communities to **energy** and lighting **efficiency** solutions through exhibitions, **education**, technology demonstrations, and research. We identify opportunities, navigate barriers to adoption, broker relationships, and showcase best practices at our resource center in the Surrogate's Courthouse.