

## Genzyme Case Analysis

- 1 What are CEO Henri Termeer's motives to encourage LEED Platinum for the Genzyme Center?

Genzyme Center would provide a collaborative multi-functional space for its staff. Termeer determined to make the building innovative and green in order to show Genzyme's creativity in the mission to develop drugs for disease cure. For this world-class big company, to achieve LEED Platinum is a required standard for both the building sustainability and the reputation from the stakeholders.

- 2 If you were Rick Mattila, would you recommend that Genzyme make the additional investments required to enable the Genzyme Center to Achieve LEED Platinum? Why or why not?

I would not recommend. The LEED Platinum would require more financial investment, while the building is already under cost pressure. The risk and benefit in the long is still not secure, including the potential to increase worker productivity, enhance retention, facilitate recruitment, and improve employee satisfaction and corporate reputation.

The current building could earn 48 LEED points, while LEED Platinum needs 4 points more. This means additional green features need to be considered. The big challenge is the difficulty to map a green feature to a LEED credit. Also, the cost of green products and materials in the market place is mostly determined, with the changes that might jeopardize LEED credits. From the financial side, the 11% discount rate has to be calculated. The possibilities include water-efficient fixtures (investment of \$117,000), green power (20% increase of normal electricity), smaller offices and cubicles (morale problems), green building education (initial \$60,000 and per year \$10,000), land conservation (\$100,000 cost). Furthermore, it is not likely that all the future buildings will follow this Platinum rating. The cost premium for rating level could be saved to upgrade the green features directly rather than satisfying the standards. There also might not be a one-size-fits-all policy, which means the standards should differ from functions and sites.

- 3 From what you can find out about Genzyme today, do you think that they made the correct decisions regarding their sustainable design approach in the Genzyme Center?

For most part yes, and this can be concluded from the evaluating building performance section. The building's energy costs were 42% lower than those conventional ones, along with the reduced operating costs and expected increases in productivity. From the press release, Genzyme Center employees recorded sick time at a 5% lower rate than other facilities. This can also be proved from the assessment of soft benefits by employee surveys. The initial survey, done two years before completion, was the baseline data. The

second was conducted a few months after occupancy. The third survey was finished two years after occupancy. From the first post-occupancy survey, most respondents said the natural light was better, more supportive of work. Compared to the first one, in the second post-occupancy survey, almost all employees felt sense of pride and well-being by direct views and access to the interior gardens. Three quarters of people had the sense of connection with colleagues thanks to the building's clear glass.

- 4 We have evaluated lists of green building features in other projects (Empire State Building, Li Fung) with the goal of choosing the features in which to invest. Do you think that Genzyme's selection criteria should be the same or different than these projects? If so how? Why? How would you place these stake-holders in the matrix from assignment #1? (We are asking you to think critically; we are NOT asking for financial calculations here.)

The Genzyme's selection criteria should be different than these projects. First, the financial implications are calculated 11% discount rate. So the stakeholders should include the parties in the process of water-efficient fixtures, green power, smaller offices and cubicles, green building education, and land conservation. Second, the criteria should follow the details of LEED credits. And the cost balance of premium and rating level should be considered. Third, the evaluation focused on the survey feedback, which means the user experience should be weighted. Last, because there is no one-size-fits-all policy, the standard should vary taken into account the functions, site, etc.

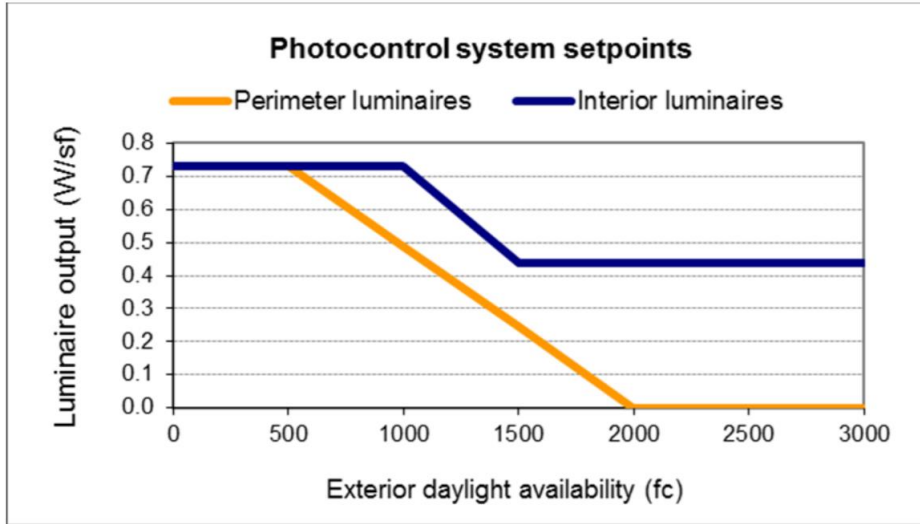
- 5 Imagine that you are a part of the early-phase design team for the Genzyme Center. Use benchmarking to estimate the ballpark annual utility costs for the Genzyme Center. There is no correct answer, but please explain your sources and logic. For benchmarking, you may use the Building Performance Database ([Links to an external site.](#)) or ENERGYSTAR Target Finder ([Links to an external site.](#)). (Holly discussed Benchmarking in a lecture available on the syllabus.) You may assume that electricity costs \$0.23/kWh and that natural gas or district steam costs \$1.62/therm (source ([Links to an external site.](#))). (Alternatively, you are welcome to make your own pricing assumptions, citing references.)

The Genzyme Center uses 36% less lighting energy than normal, while the lighting hours could be long to eleven per day. Without photocontrols 44% of energy would otherwise be wasted<sup>12</sup>.

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<sup>1</sup> NYSERDA\_Case\_Studies/NYSERDA\_Daylighting

<sup>2</sup> Real-time Energy Management: Saving Energy Every 15 Minutes



	Lighting power density (LPD)	Annual hours of lighting use	Annual lighting energy use (kWh/sf.yr)
Genzyme building	0.73	3935	1.64
Typical ASHRAE/IES 90.1 -compliant building	0.9	2866	2.58
Genzyme building without photocontrols	0.73	3935	2.87