

Kendeda Building for Innovative Sustainable Design



The first LIVING BUILDING in the Southeast

Key Details: livingbuilding.gatech.edu/key-living-building-details

The **Kendeda Building for Innovative Sustainable Design** is the first building in the Southeast to earn [Living Building Challenge](#) certification, the world's most ambitious and holistic green building achievement. Rather than being less bad for the environment, The Kendeda Building fosters regenerative and restorative relationships amongst humans and nature where people give back more to the environment than they take.

Primary Use of the Building: Non-departmental education, research, and outreach opportunities.

Net Positive Energy Annually: Living Buildings must generate at least 105% of their annual energy needs through on-site renewable energy.

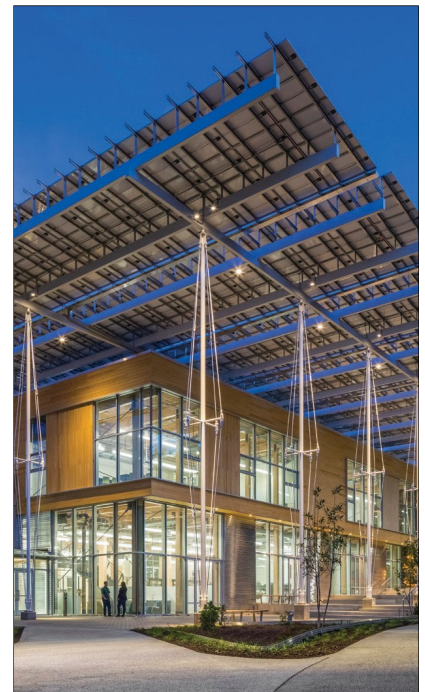
- **The Kendeda Building is over 200% net positive energy each year.** Other Georgia Tech buildings use the excess electricity.
- 330 kW (DC), 917 SunPower solar panels generate approximately 440,000 kWh annually.
- Building is 80% more efficient than a comparable new, conventionally built higher education building.

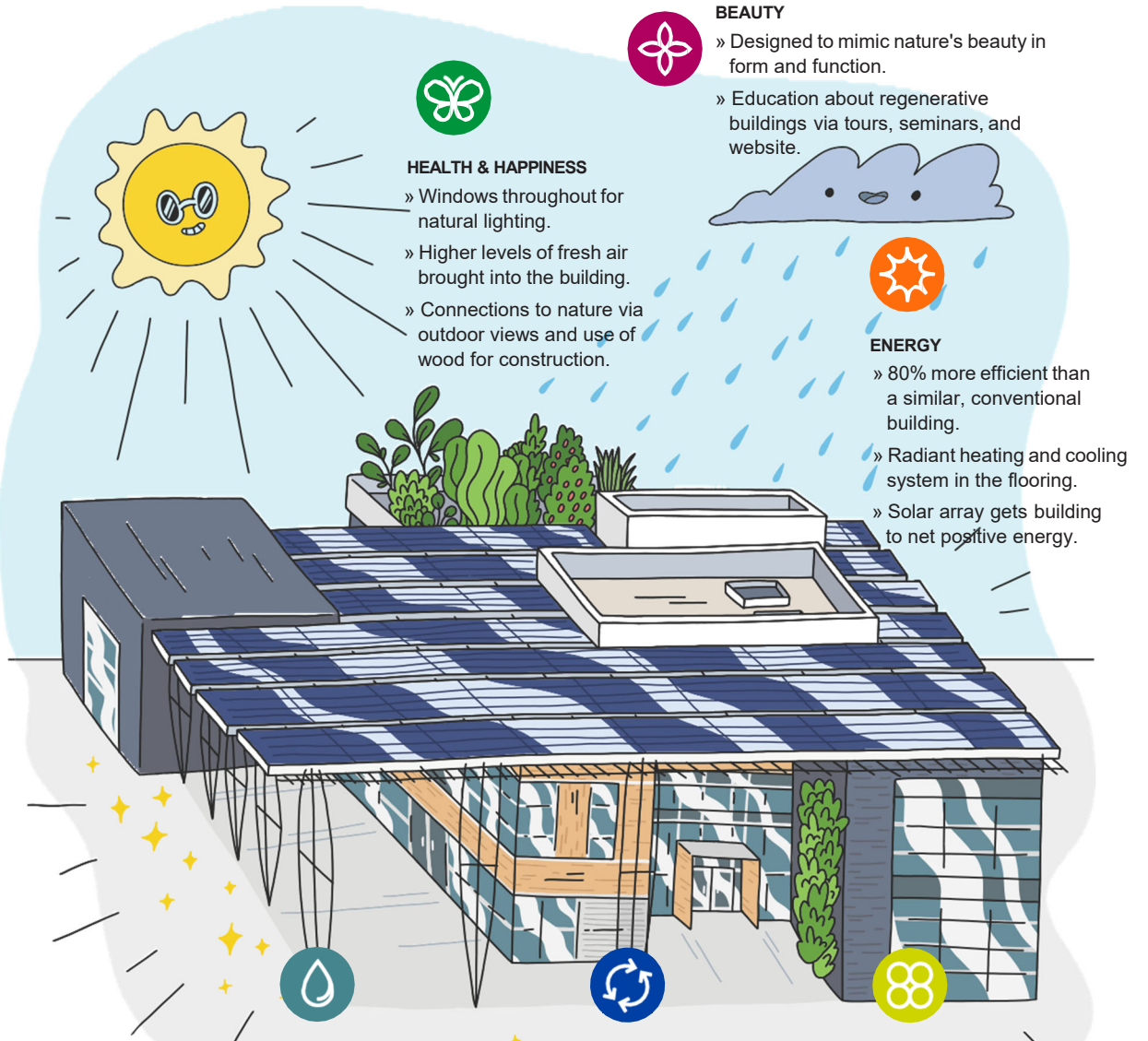
Net Positive Water Annually: The Kendeda Building site, which was formerly a parking lot, acts like a forest by **infiltrating into the ground approximately 15 times more water than needed for operations each year.**

- Stormwater mitigation via 50,000 gallon cistern that stores rainfall and slowly releases excess water into the ground.
- Greywater is pumped to a constructed wetland at the building's entrance where natural processes improve water quality. Instead of going into the sewer, the treated greywater infiltrates the soil to recharge groundwater.
- The building's 12 foam flush toilets and 4 waterless urinals combined use less water than one typical low-flow toilet.
- A composting toilet system converts solids and liquids into fertilizer onsite. The system does not connect to the sewer.

Economic Impacts: The project kept economic benefits close to home by **sourcing at least 50% of products and services from within 621 miles** (1,000 km).

- Construction of the building diverted more waste from the landfill than sent to the landfill through use of salvaged materials, which saved over \$60,000 as compared to using new materials.
- Project preserved Georgia Tech's heritage by converting original heart pine joists used in the construction of the iconic Tech Tower into treads for the Kendeda Building's monumental staircase.
- Portion of the floor deck incorporated 25,000 linear feet of dismantled movie sets, and was constructed by participants of a workforce development program for economically disadvantaged Atlanta residents.





BEAUTY

- » Designed to mimic nature's beauty in form and function.
- » Education about regenerative buildings via tours, seminars, and website.



HEALTH & HAPPINESS

- » Windows throughout for natural lighting.
- » Higher levels of fresh air brought into the building.
- » Connections to nature via outdoor views and use of wood for construction.



ENERGY

- » 80% more efficient than a similar, conventional building.
- » Radiant heating and cooling system in the flooring.
- » Solar array gets building to net positive energy.



WATER

- » Pervious surfaces dramatically reduce stormwater runoff.
- » Rainfall managed on site.
- » Greywater treated via constructed wetland.
- » Condensate water used for ground-level irrigation.
- » Composting toilets dramatically reduce water usage.



EQUITY

- » Centrally located ramp allows accessibility to all.
- » Project does not block natural daylight to surrounding buildings.
- » By virtually eliminating stormwater runoff, building dramatically reduces negative impacts to downstream communities.



MATERIALS

- » Minimizes the use of materials that contain unhealthy chemicals to the greatest extent possible.
- » Project construction achieved zero carbon footprint by incorporating low-carbon and salvaged building materials, recycling over 99% of construction waste, and by purchasing a one-time carbon offset.



PLACE

- » Built on previously developed land.
- » Rooftop garden has honeybee hives, fruit, and vegetable plants.
- » Pedestrian-friendly features and bus stop.

The Kendeda Building is a living, learning laboratory. This is a place for experimentation and discovery. The building was designed and built to meet the requirements of the Living Building Challenge (version 3.1), a building certification program and regenerative design framework created and administered by the International Living Future Institute.

This rigorous certification consists of seven performance areas or "Petals" that are divided into 20 requirements called "Imperatives." As you explore this building, you will find performance areas designated by the icons and colors above.