

Project Report

Georgia Tech's Carbon Neutral Energy Solutions Laboratory

Atlanta, Georgia



Architecture: HDR Architecture

Photography: Jonathan Hillyer

KALWALL®

high performance translucent building systems

KALWALL SPECIFICATION:

Panel: 2.75" | 70 mm

Grid core: reverse shoji

Exterior FRP: crystal

Interior FRP: white

System finish: aluminum #79

U-Value: .14 | .78 Wm²K

Solar Heat Gain Coefficient: 0.17

Visible Light Transmission: 12%

WHAT IS KALWALL?

A translucent, structural sandwich panel that provides:

Glare-free, balanced daylighting

Superior thermal performance

Energy + electricity saving

Low maintenance life cycle requirements

Safety + security through visual privacy

Durability + graffiti / vandal-resistance

Hurricane, explosion venting + blast rated options



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For unparalleled thermal performance in translucent daylighting, consider specifying Kalwall with **CABOT's Lumira®** aerogel insulation. Available in 2.75" (70 mm) panel formats up to: 4' x 12' (1200 mm x 3600 mm) and 5' x 10' (1500 mm x 3000 mm) maximum.

Georgia Tech's Carbon Neutral Energy Solutions Laboratory

In the simplest terms, a net zero energy building generates as much or more energy than it uses. Georgia Tech's Carbon Neutral Energy Solutions Laboratory (CNES) in Atlanta, Georgia, is one of the few buildings in the country that approaches net zero carbon emissions and has been hailed for setting a new standard in sustainable design.

Kalwall diffuse natural lighting curtainwall systems are a key component to the 42,000 square foot building that recently earned another distinction for its design when the American Institute of Architects (AIA) New Jersey named the CNES a Merit Award winner. The building was designed by HDR Architecture of Princeton, N.J.

In its jury comments, the AIA New Jersey said "this building puts convictions about environmental friendliness to work".

Georgia Tech is a public research university and the CNES is the centerpiece of its mission. HDR describes the CNES as a facility that "sets a new standard for sustainable design for buildings of its type by optimizing passive energy technologies, reducing electricity loads, and maximizing the use of renewable energy".

An impressive curtainwall of Kalwall panels floods the main portion of the building in natural diffuse light, integrating perfectly with the goals of the CNES because of its best industry solar heat gain control. It is one reason the building achieved LEED-NC Platinum certification.

Among the other awards the building has won include:

2013 Beyond Green™ Award of Merit for High Distinction in High-Performance Buildings – National Institute of Building Sciences (NIBS) and Sustainable Buildings Industry Council.

2013 Merit Award, Excellence in Architecture category - Society of College and University Planners (SCUP)/AIA Committee on Architecture for Education (AIA-CAE) Excellence Awards

2012 Merit Award Built Category - American Institute of Architects (AIA), Georgia Chapter

2012 Best Project, Green Building Category - ENR Southeast, Best Projects contest



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