

Design team uses Autocase to pursue project and inform the client of PHIUS 2018 + Timber design benefits

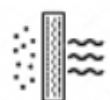


Project Description

The design team wanted to use data and metrics to support and differentiate their project pursuit. They were considering varying three material frames of a building and showing the impacts of designing to Passive House Institute US (PHIUS) +2018 standards.

They were weighing the impacts of EUI, on-site and off-site renewables, embodied carbon, and indoor environmental quality aspects like MERV filters, air flow rates, and thermal comfort controls.

Strategies Assessed



HVAC, MERV & temp



Natural gas



Embodied CO₂



Electricity use



On-site and Off-site Renewables

DESIGN PHASE
Planning

BUILDING TYPE
Mixed-Use Office Space

SIZE
240,000 sqft

LOCATION
North-East US

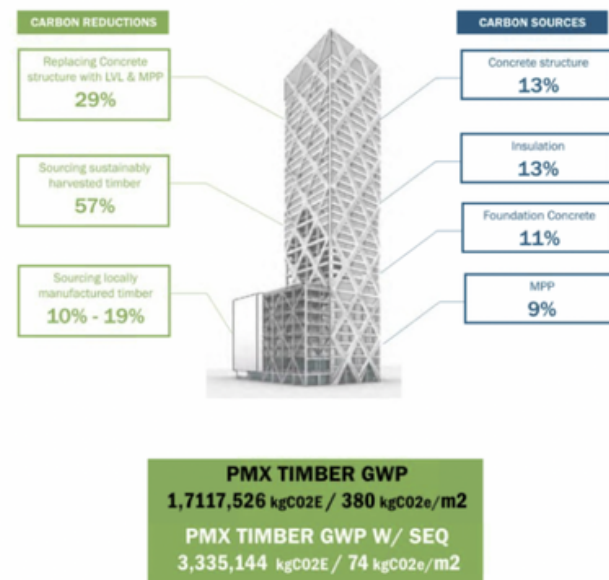
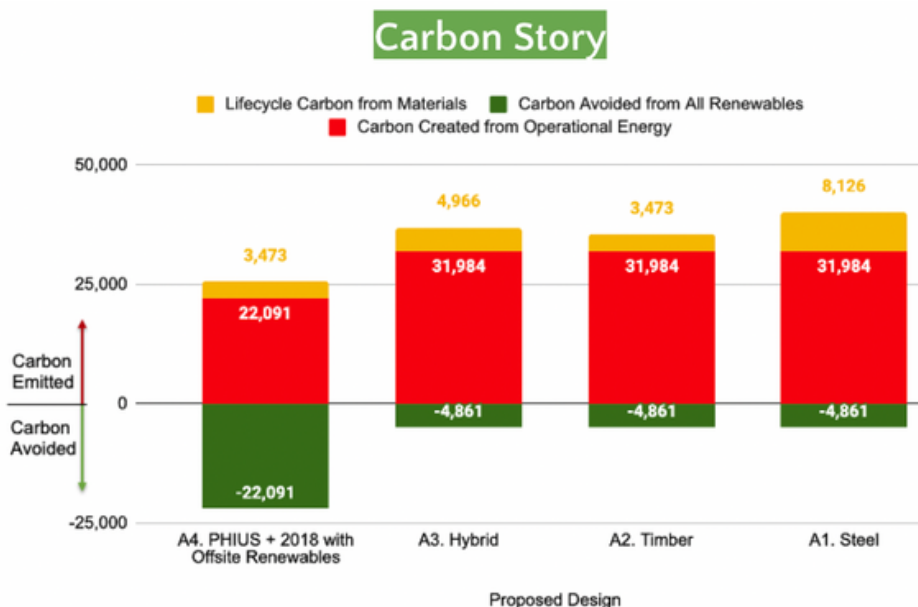
How Autocase was Used

The team used conceptual design assumptions, Autocase defaults and Passive House standards to enter data into the following Autocase modules:

- Energy & Renewable Energy
- Materials
- Indoor Air Quality

CATEGORY	IMPACT TYPE	PHIUS+ 2018 SCENARIO
FINANCIAL	SAVINGS FROM ELECTRICITY	\$3,771,000
FINANCIAL	SAVINGS FROM NATURAL GAS	\$1,004,000
SOCIAL	OCCUPANT PRODUCTIVITY	\$14,340,000
SOCIAL	OCCUPANT HEALTH	\$2,499,000
SOCIAL	OCCUPANT ABSENTEEISM	\$1,424,000
ENVIRONMENTAL	CARBON EMISSIONS	\$1,740,000
ENVIRONMENTAL	AIR POLLUTION	\$652,400
TRIPLE BOTTOM LINE		\$25,430,400

CARBON ACCOUNTING TRIPLE BOTTOM LINE ANALYSIS



The Outcome

The design team was able to bolster their project pursuit by adding the triple bottom line impact of their design using conceptual data. They were also able to quantify CO₂ emitted and avoided from energy, renewables and materials using Autocase's defaults and location-specific carbon calculator.

Want to learn more?

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autocase.com