



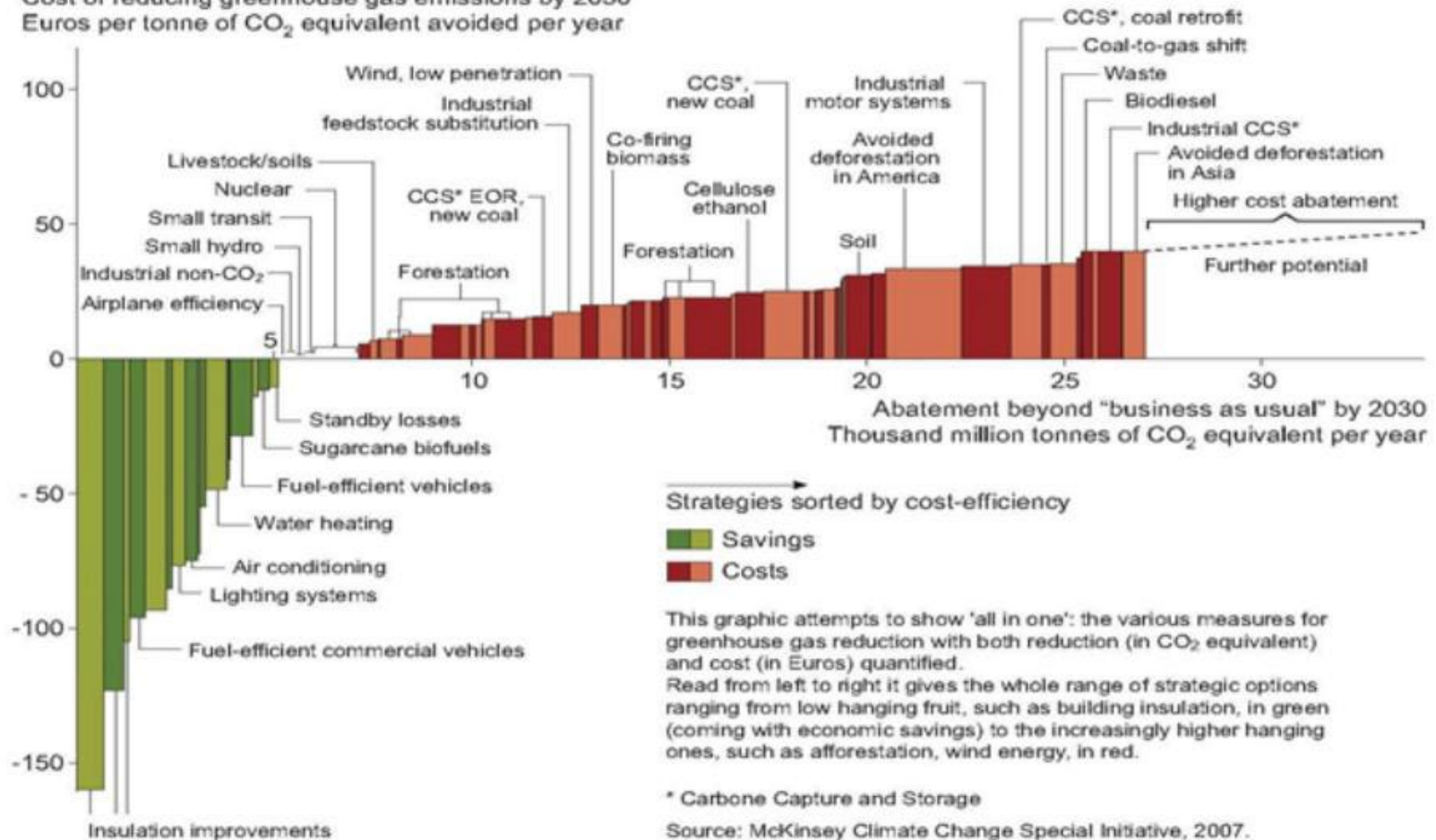
ENERGY EFFICIENCY DONE RIGHT INTRODUCES

**AMERICA'S BILLION DOLLAR
ENERGY DEMAND
REDUCTION PLAN**

Strategic options for climate change mitigation

Global cost curve for greenhouse gas abatement measures

Cost of reducing greenhouse gas emissions by 2030
Euros per tonne of CO₂ equivalent avoided per year



AMERICA'S BILLION DOLLAR ENERGY DEMAND REDUCTION PLAN WILL FOCUS ON BUILDINGS AND STRUCTURES. WE WILL TARGET COMMERCIAL, RESIDENTIAL, GOVERNMENTAL, AND INSTITUTIONAL BUILDINGS AND STRUCTURES, KNOWING THAT IN THE UNITED STATES BUILDINGS AND STRUCTURES CONSUME OVER SEVENTY PER CENT OF THE ELECTRICITY PRODUCED AND CREATE OVER FORTY PER CENT OF THE CARBON EMISSIONS.

THE FOCUS WILL BE "TO REDUCE BEFORE WE PRODUCE"! MINIMIZE ENERGY USE TO CREATE SUFFICIENT ENERGY USE SAVINGS TO FUND EFFICIENCY THEN RENEWABLE ENERGY PROJECTS. WE CAN EXCEED OUR GOAL!

WE WILL REACH OUR GOALS IN EACH SECTOR AS WE DEMONSTRATE WITH THE COMMERCIAL BUILDING SECTOR

Commercial buildings consume 13.6 quads of electricity (35 percent of electricity consumed in the U.S),³ and generate 826 million metric tons of carbon dioxide emissions (16 percent of all U.S. carbon dioxide emissions)

The potential to reduce energy consumption in existing and new commercial buildings is enormous. On average, 30% of the energy used in commercial buildings is wasted, according to the U.S. Environmental Protection Agency.

<https://www.energy.gov/eere/buildings/about-commercial-buildings-integration-program#:~:text=Commercial%20buildings%20consume%2013.6%20quads,all%20U.S.%20carbon%20dioxide%20emissions>

THERE IS AN ESTIMATED 97 BILLION SQUARE FEET
OF COMMERCIAL BUILDINGS IN AMERICA WITH AN
AVERAGE COST FOR UTILITIES OF \$2.10.

THE COMMERCIAL BUILDINGS OF
AMERICA ARE RESPONSIBLE FOR

\$203.7 BILLION OF UTILITY COSTS

IF THE 30% WASTED ESTIMATE IS CORRECT THAT WOULD EQUAL

OVER \$61 BILLION

Energy loss through glazing (windows) is the largest and most variable loss in buildings and has major implications on energy consumption and peak heating and cooling loads

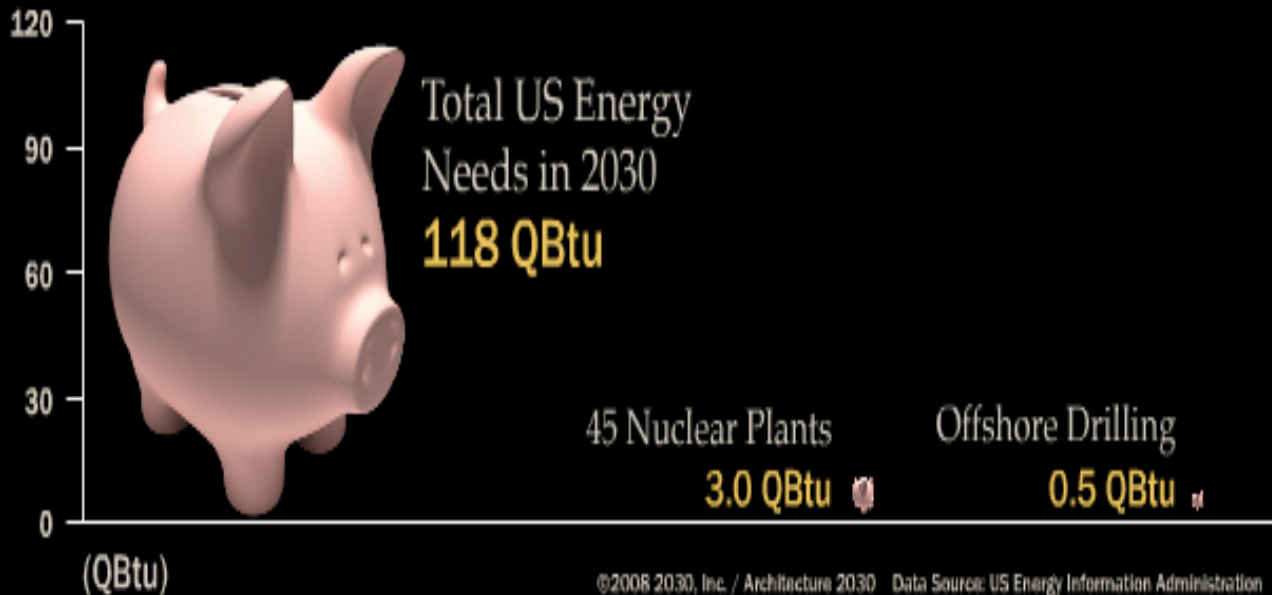
“2009 Buildings Industry Data Book”



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The

"The road to energy independence, economic recovery and reductions in greenhouse gas emissions runs through the Building Sector."

-Edward Mazria



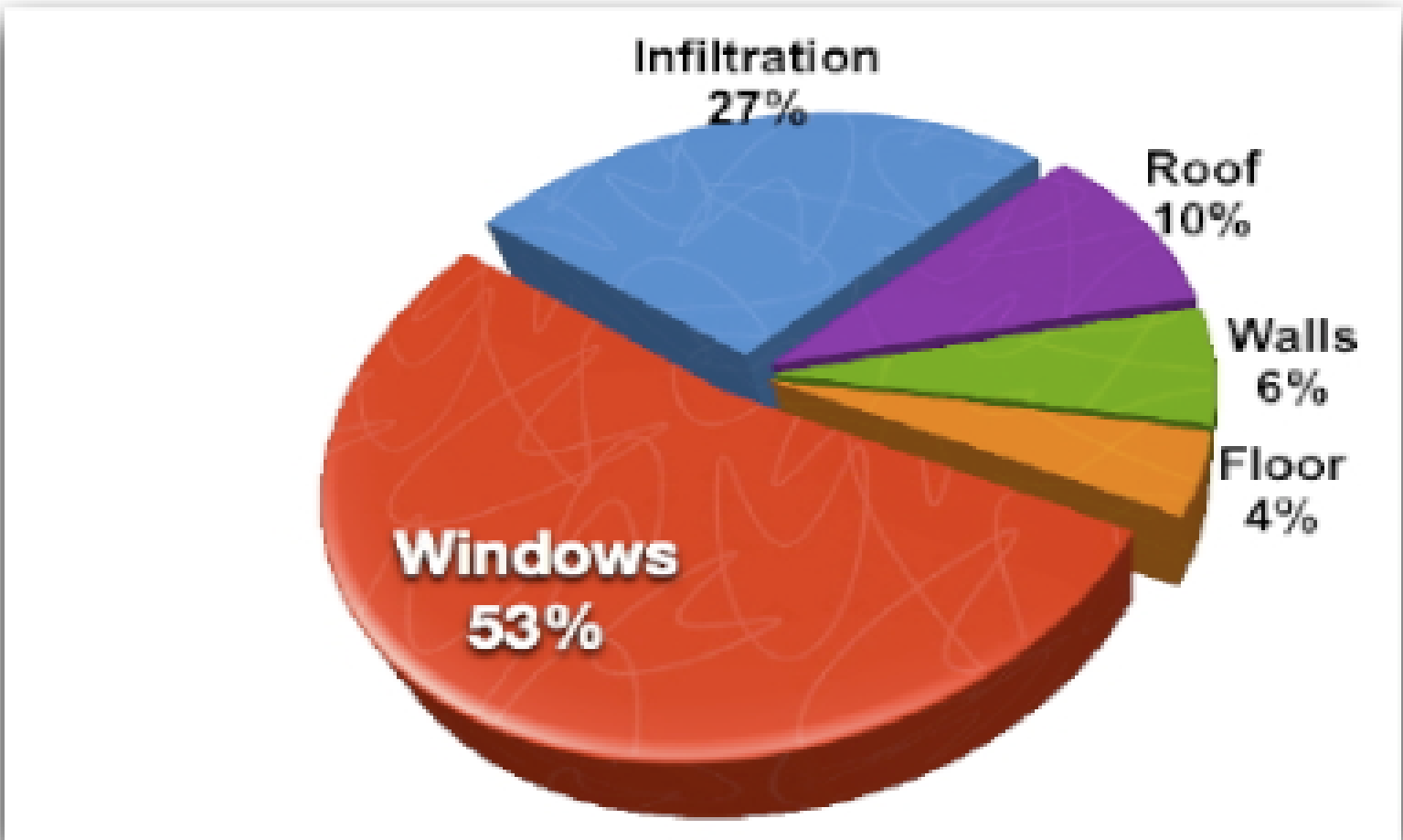


Buildings are universal and shelter virtually every aspect of our lives—we work, live, learn, govern, heal, worship, and play in buildings. As a result, buildings have a significant impact on energy use and the environment. According to the U.S. Energy Information Agency, homes and commercial buildings use 71% of the electricity in the United States and this number will rise to 75% by 2025

<http://www.nrel.gov/buildings/>

“buildings are responsible for approximately 38 percent of the US carbon dioxide emissions”

BOMA Magazine pg 20 Feb 2010



ASHRAE Standard 90

Windows are considered responsible for more than 50% of a building's heat loss by the industry Standard 90 developed by the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)

THE BILLION DOLAR PLAN

- DO A DETAILED ANALYSIS OF THE BUILDING TO DETERMINE THE PAYBACK AND EMISSIONS REDUCTION WHEN ALL THE GLAZING IS INSULATED WITH IN'FLECTOR RADIANT BARRIER WINDOW INSULATORS
- PROVIDE OR OBTAIN A FINANCING SOURCE. THE BUILDING ITSELF CAN BE USED AS COLATERAL
- SCHEDULE A LOAN PAYBACK TO INSURE THE MONTHLY SAVINGS ON ENERGY USE ARE WELL LESS THAN THE ESTIMATED PAYMENT FOR THE INSULATORS
- PAY ALL THE MONTHLY ENERGY SAVINGS DIRECTLY AGAINST THE LOAN
- THE LOAN WILL BE PAID OFF IN TEN YEARS OR LESS WHILE THE INSULATORS AVERAGE OVER TWENTY YEARS OF USE.
- AFTER THE LOAN IS PAID OFF THE CONTINUING SAVINGS CAN FUND ANOTHER ENERGY SAVINGS OR A RENEWAL ENERGY PROJECT

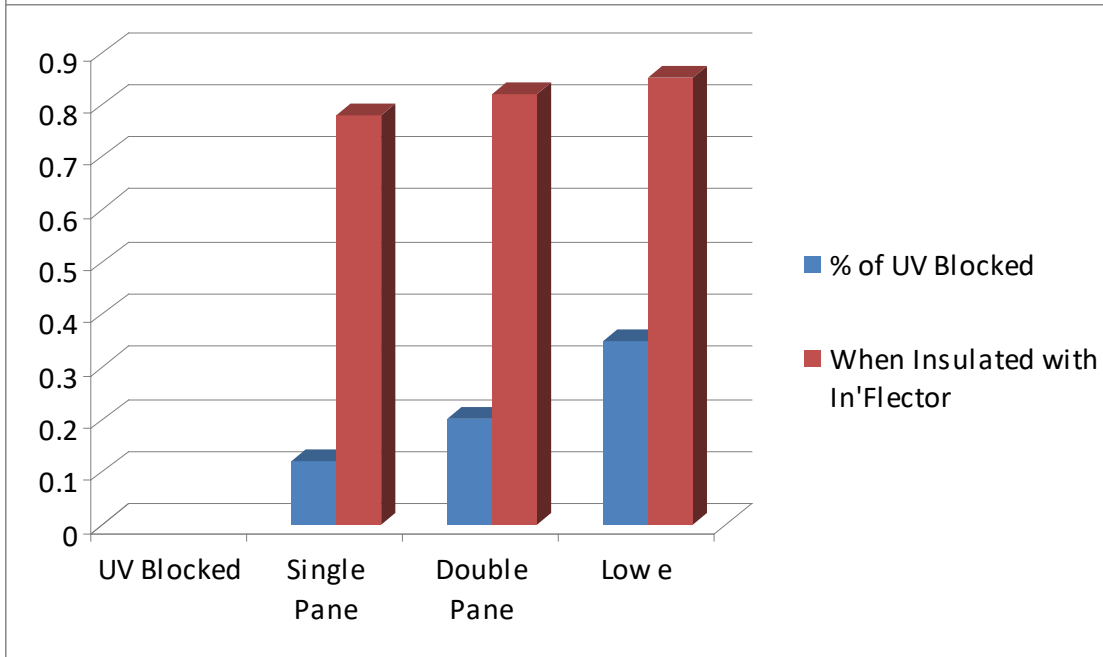
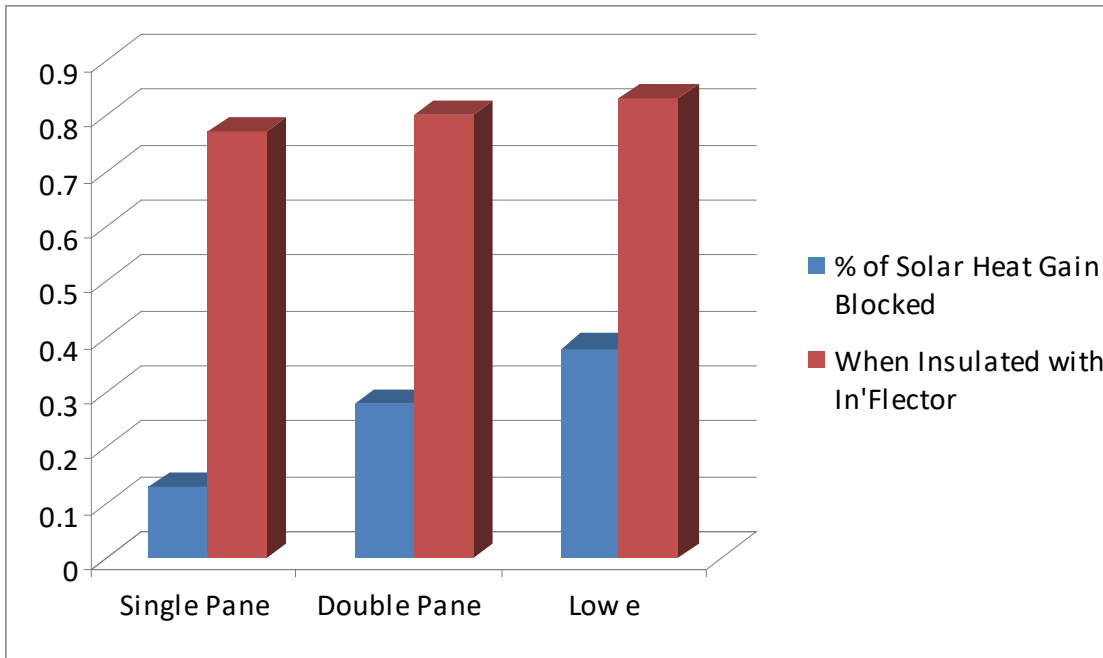
THE BUILDING OWNERS, STAFF, AMERICA, AND OUR
PLANET WIN! WIN-WIN-WIN

ACROSS ALL BUILDING TYPES THE SAVINGS WILL EASILY BE
GREATER THAN ONE BILLION DOLLARS!



Texas Conservation Commission Building – AUSTIN, TEXAS
Left Window – No **Inflector Radiant Barrier Window Insulator**

METERED RESULTS USING EDTM GLASS TESTING EQUIPMENT



"While many sectors of the economy, notably transportation, have been critically studied, until recently, one of the largest sectors--the buildings sector--has been virtually neglected. In the last few years, researchers have recognized that infiltration (the flow of air through leaks in the building envelope) is a critical factor in energy loss in buildings and merits concentrated research effort if national energy conservation goals are to be served. We know, for example, that the energy loss due to infiltration is between 6% and 9% of the total energy budget for the nation."

From- **Air Infiltration in Buildings.**

[Sherman, Max Howard](#)

(PH.D.)--UNIVERSITY OF CALIFORNIA, BERKELEY

Materials for Energy Efficiency and Thermal Comfort in Buildings

ALMOST HALF OF THE TOTAL ENERGY PRODUCED IN THE DEVELOPED WORLD IS INEFFICIENTLY USED TO HEAT, COOL, VENTILATE AND CONTROL HUMIDITY IN BUILDINGS, TO MEET THE INCREASINGLY HIGH THERMAL COMFORT LEVELS DEMANDED BY OCCUPANTS. THE UTILIZATION OF ADVANCED MATERIALS AND PASSIVE TECHNOLOGIES IN BUILDINGS WOULD SUBSTANTIALLY REDUCE THE ENERGY DEMAND AND IMPROVE THE ENVIRONMENTAL IMPACT AND CARBON FOOTPRINT OF BUILDING [STOCK](#) WORLDWIDE.

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