

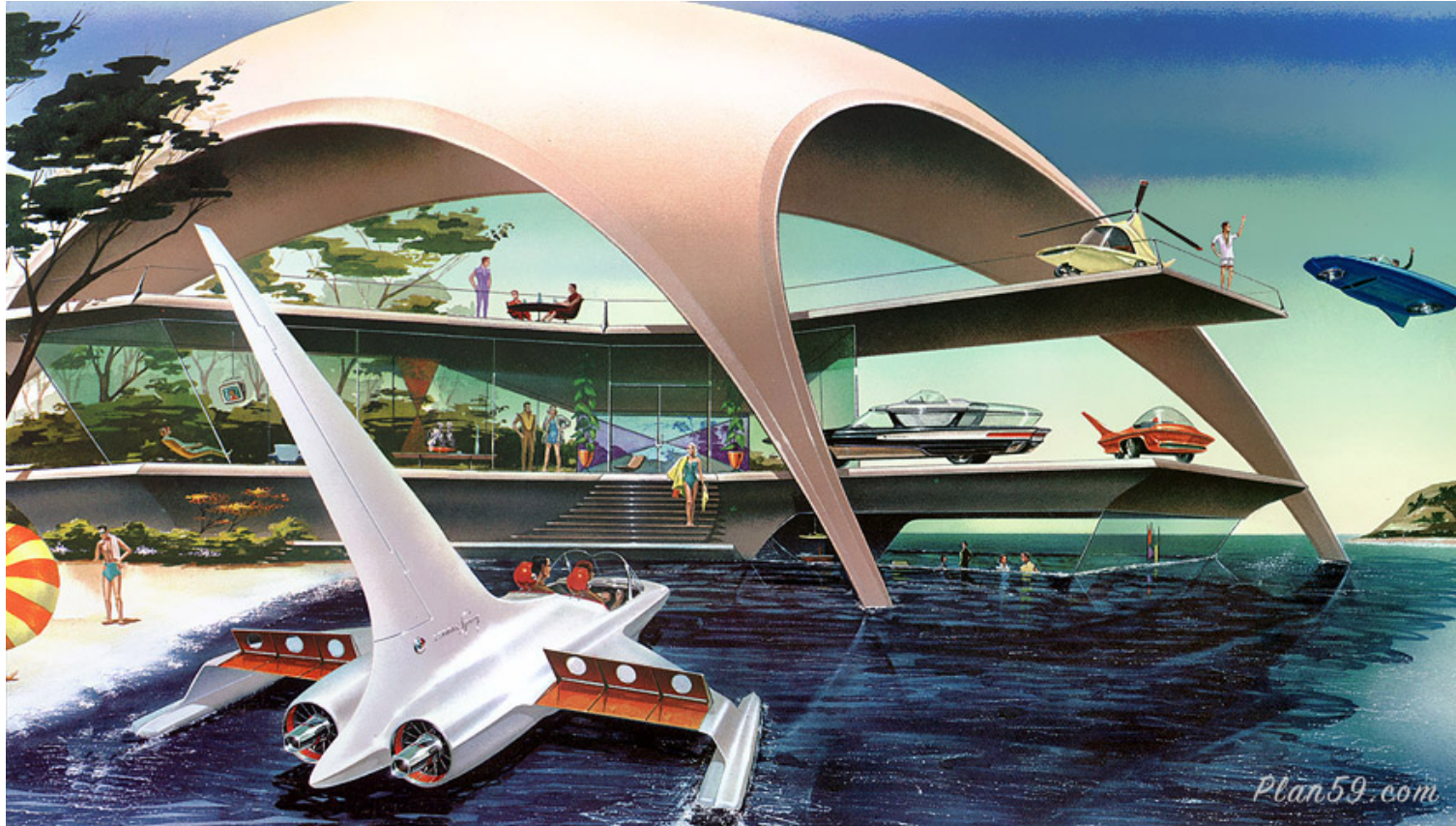
# BUILDINGS OF THE FUTURE



**LAURIE KERR**  
 SR. POLICY ADVISOR, NYC MAYOR'S OFFICE  
 APRIL 26, 2011

# Dystopian



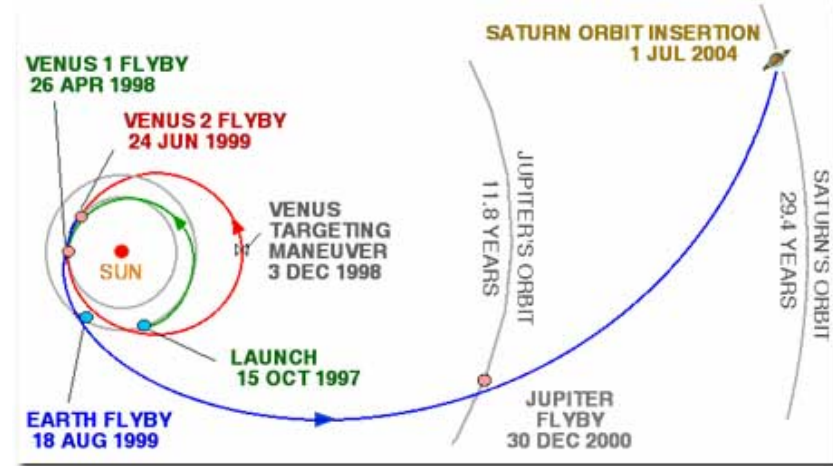
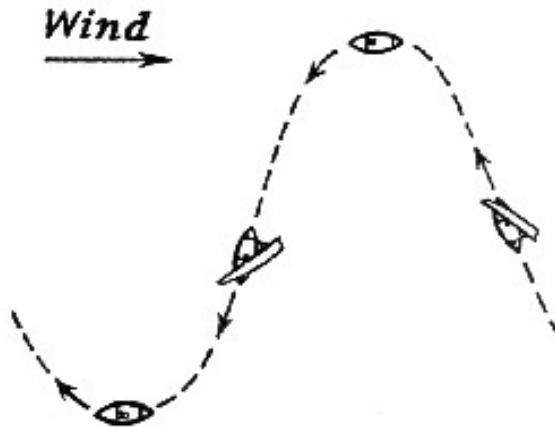




Bucolic-nostalgic-utopian



# The trajectory



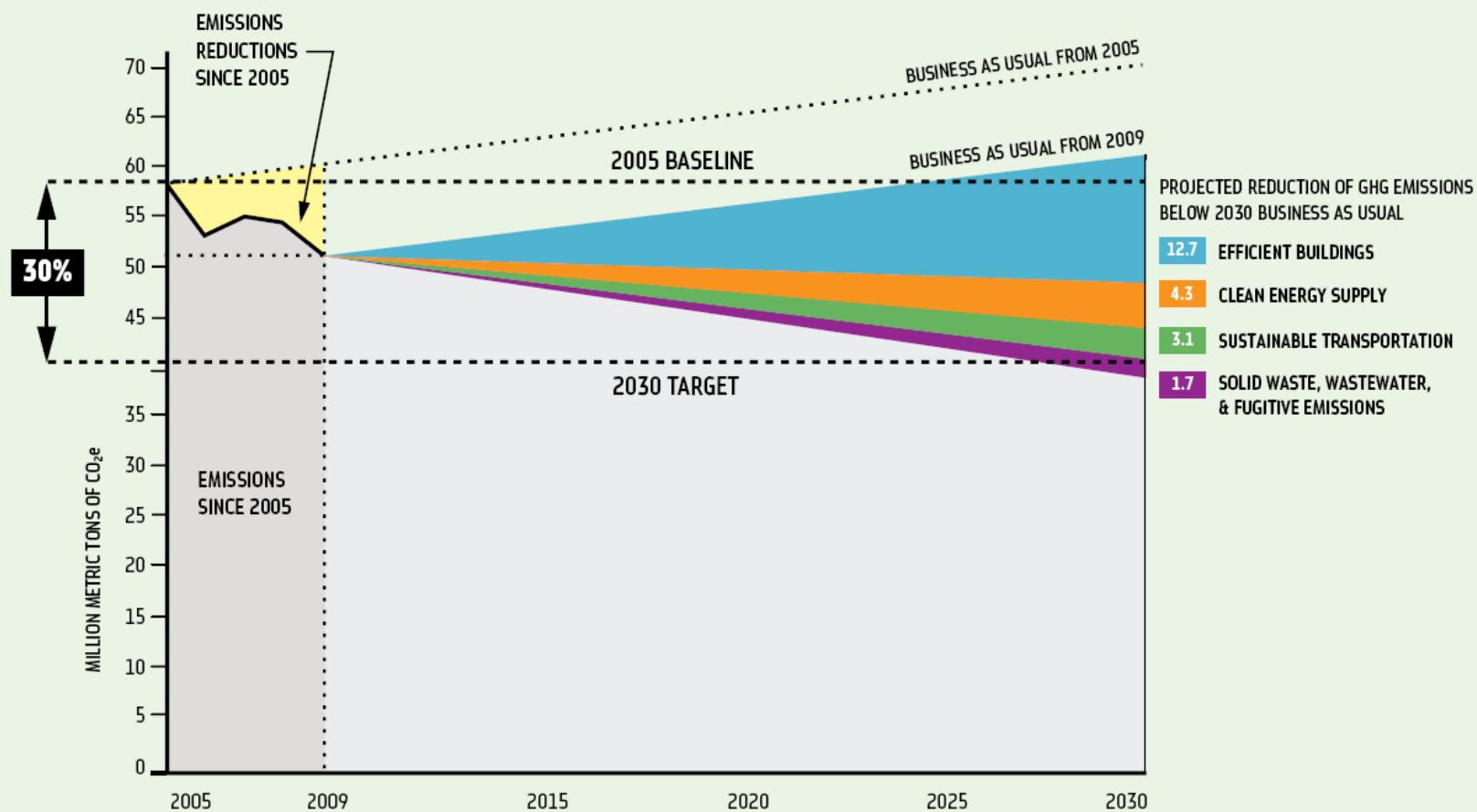
SAILING OR SHOOTING A ROCKET

***AMBITIOUS***

***BUT***

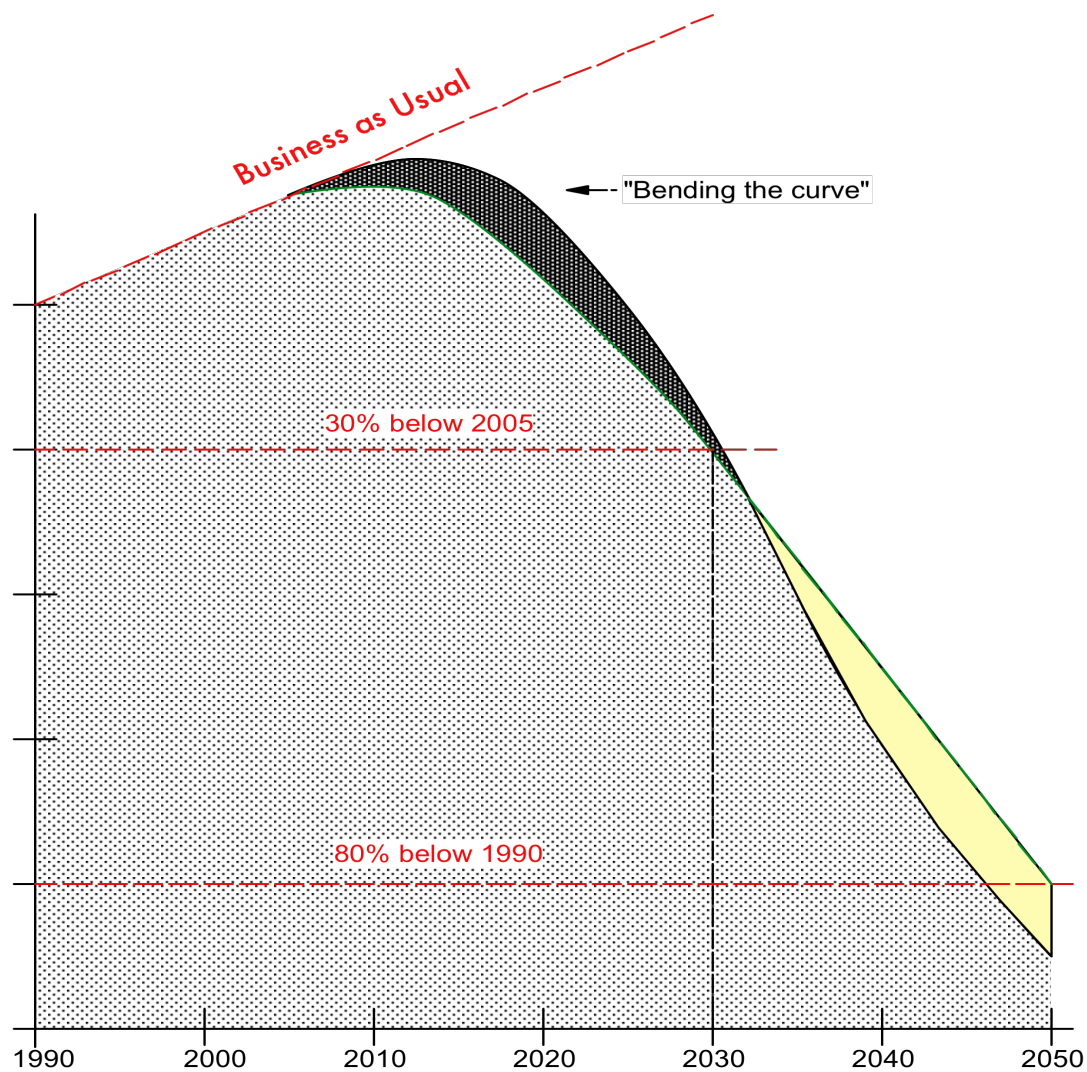
***ACHIEVABLE***

## Projected Impacts of Our Greenhouse Gas Reduction Strategies



Source: NYC Mayor's Office and M.J. Beck Consulting, LLC

# Bending the Curve



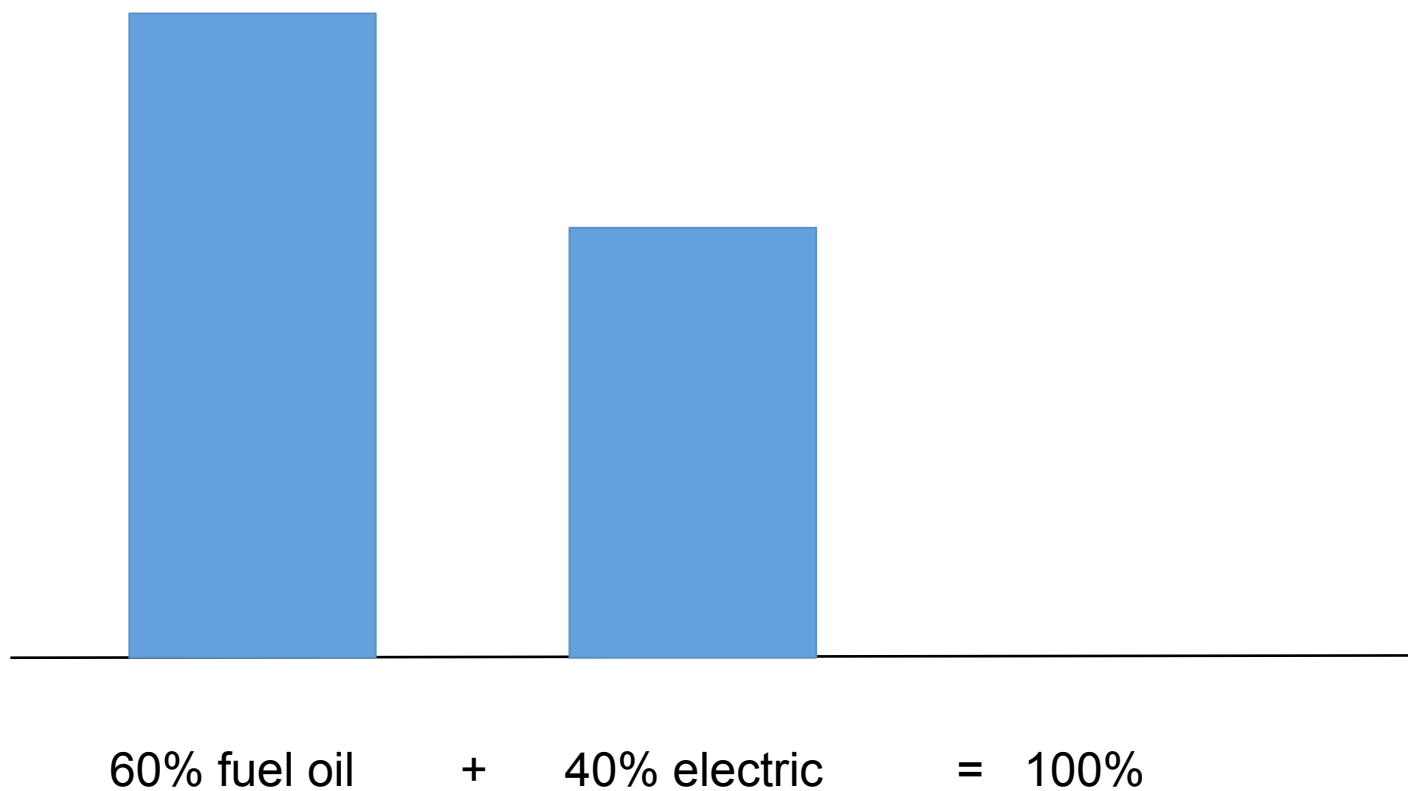


### INITIATIVE 2

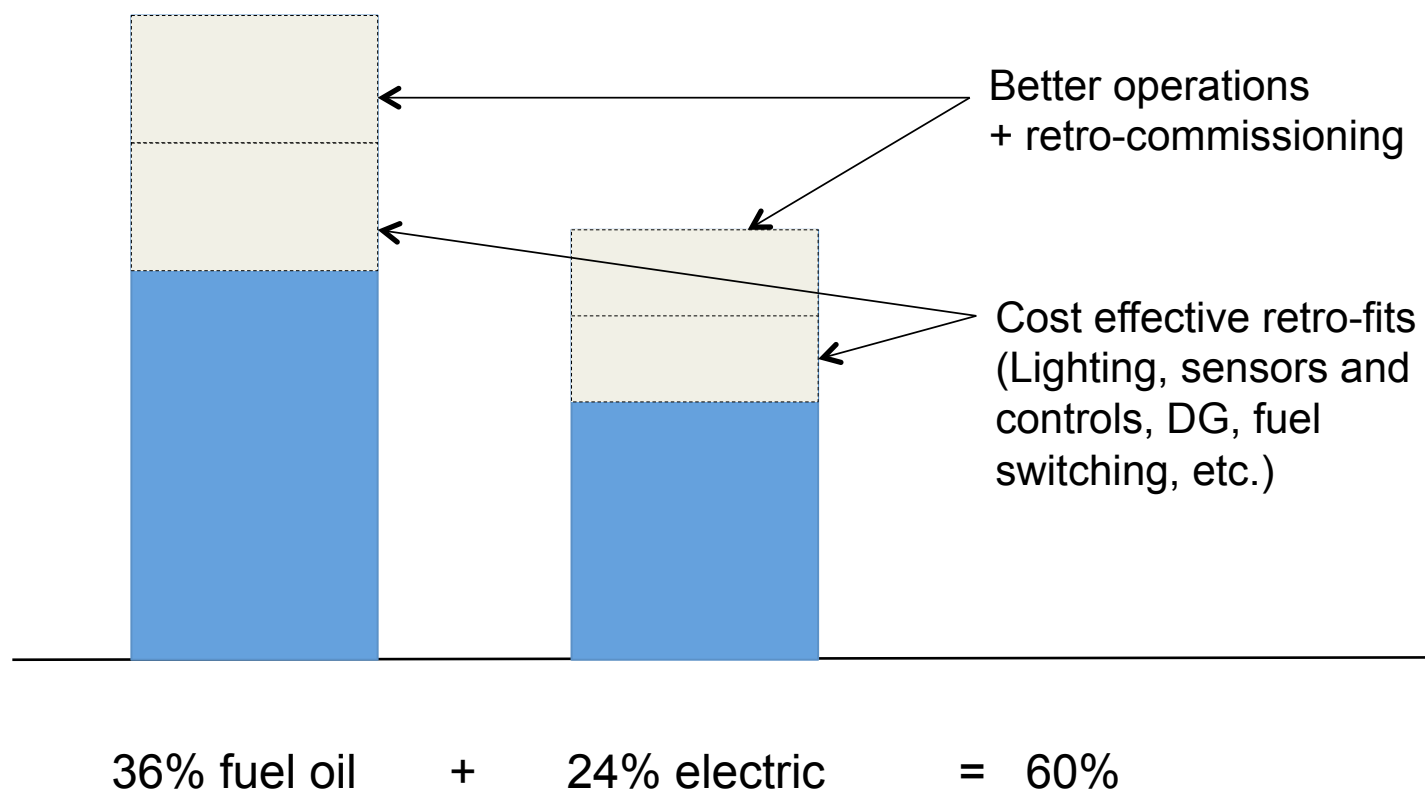
## **Assess opportunities to further reduce greenhouse gas emissions by 80% by 2050**

Our GHG reduction goal is ambitious, but it can be achieved using existing technology. The Intergovernmental Panel on Climate Change (IPCC) has determined that global GHG emissions need to be reduced by 60 to 80% below 1990 levels by 2050 to avoid the catastrophic effects of climate change. New York City can lead by example and demonstrate how to achieve this goal. That is why we will complete a study to determine potential strategies to reduce citywide GHG emissions by 80% below 2005 levels by 2050.

## Reducing our Emissions from Buildings



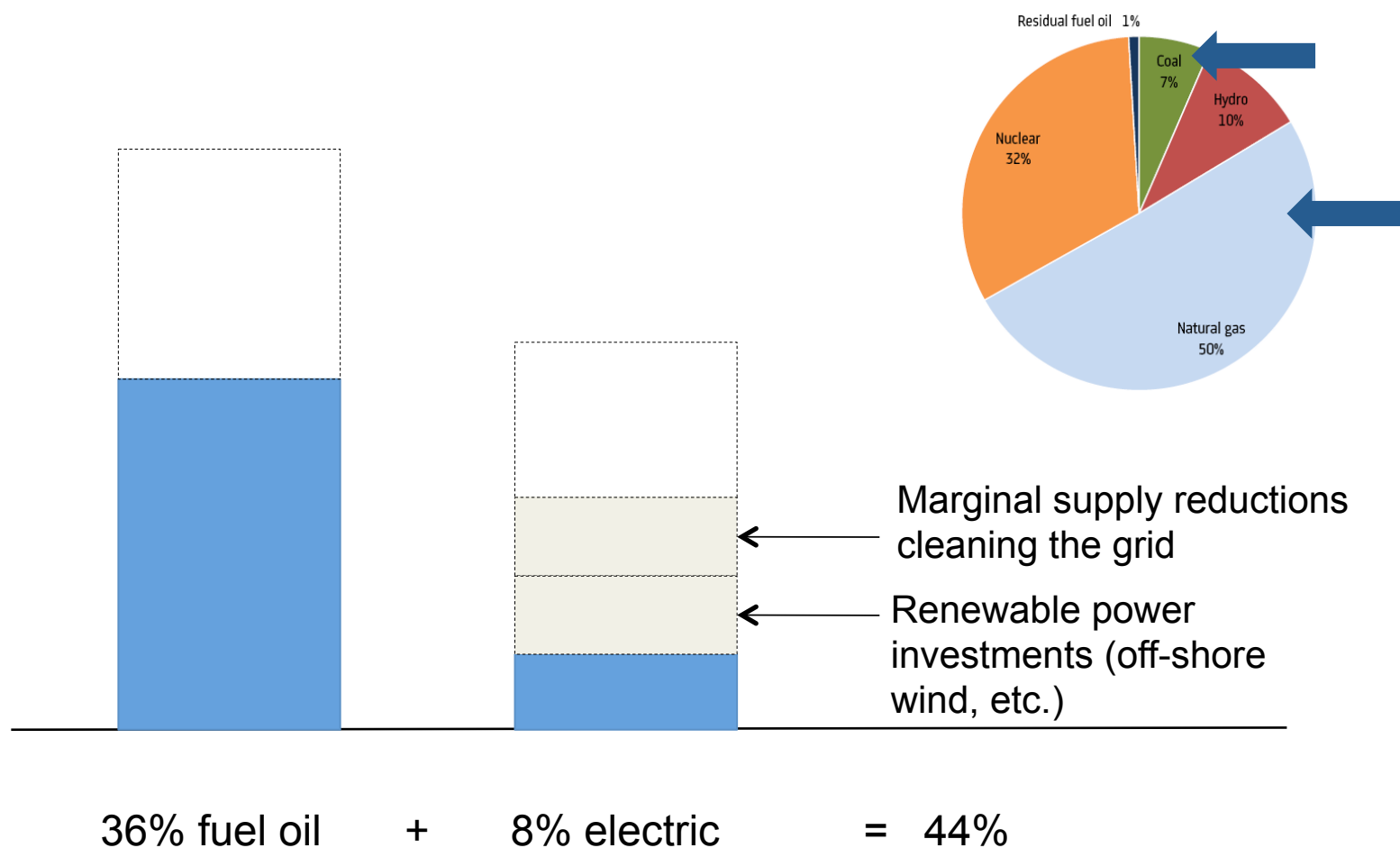
# Reducing our Emissions from Buildings



# Reducing our Emissions from Buildings

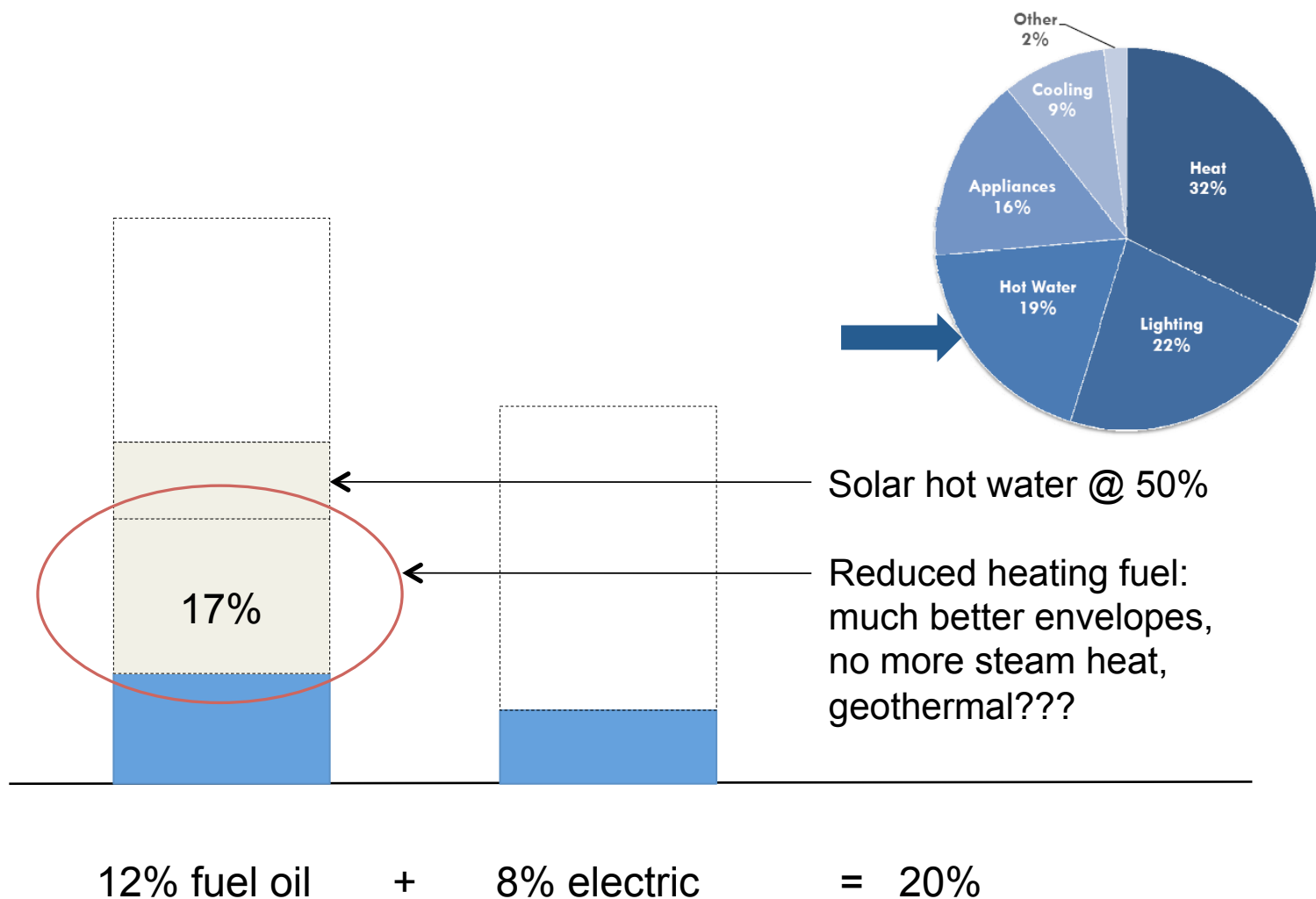


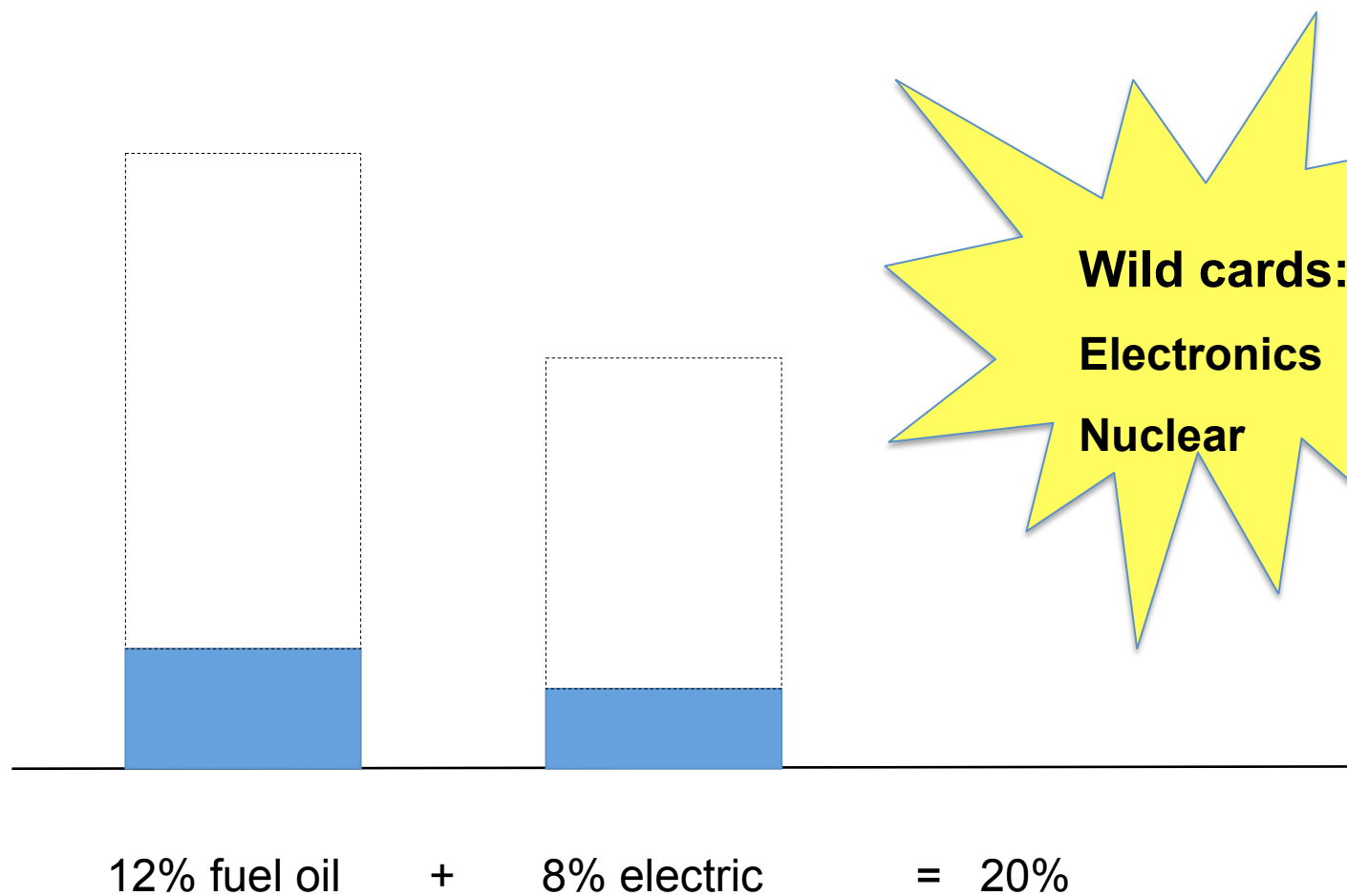
Figure 10: Electricity Generation Fuel Mix for NYC Consumption





# Reducing our Emissions from Buildings





**Wild cards:**  
**Electronics**  
**Nuclear**

# *ENERGY*

- USED ONLY WHEN NEEDED (SENSORS AND CONTROLS)
- USED ONLY WHERE NEEDED (WEATHER-ATTUNED CLOTHING)
- BUILDINGS FORM COMES FROM ANALYSIS
- ALL-GLASS BUILDINGS CONSIDERED RETRO
- MAINTENANCE WILL BE A HIGH-STATUS PROFESSION

# *ROOFS*

- NO BLACK TAR ROOFS
- COOL ROOFS AND BLUE ROOF DETENTION TYPICAL
- SOLAR PV AND THERMAL ON 25% OF BUILDINGS
- 25% OF BUILDINGS HAVE ROOF GARDENS, GREEN ROOFS, OR AGRICULTURE



## *SITES*

- ASPHALT BANNED ON SITES
- ALL PAVEMENT PERMEABLE
- LAWNS WITH TURF ARE DISDAINED AS UGLY
- REMOVING OR DAMAGING TREES IS CONSIDERED A CRIME

## ***MATERIALS***

- TOXIC BUILDING MATERIALS BANNED
- MOST BUILDING MATERIALS ARE REUSED; THE REST RECYCLED

## ***WATER***

- ALL INEFFICIENT FIXTURES HAVE BEEN REPLACED WITH WATERSENSE UNITS

## *PHYSICAL ACTIVITY*

- ALL MEDIUM AND LARGE BUILDINGS HAVE BICYCLE STORAGE AND EXERCISE ROOMS
- TAKING 1 TO 3 STORY ELEVATOR RIDES IS SIMPLY NOT DONE

## *RESILIENCE*

- BUILDINGS ARE DESIGNED FOR PASSIVE SURVIVABILITY — WITH OPERABLE WINDOWS
- MECHANICAL AND ELECTRICAL EQUIPMENT IS OUT OF THE BASEMENT

We're on our way...

