

# Leading by Example

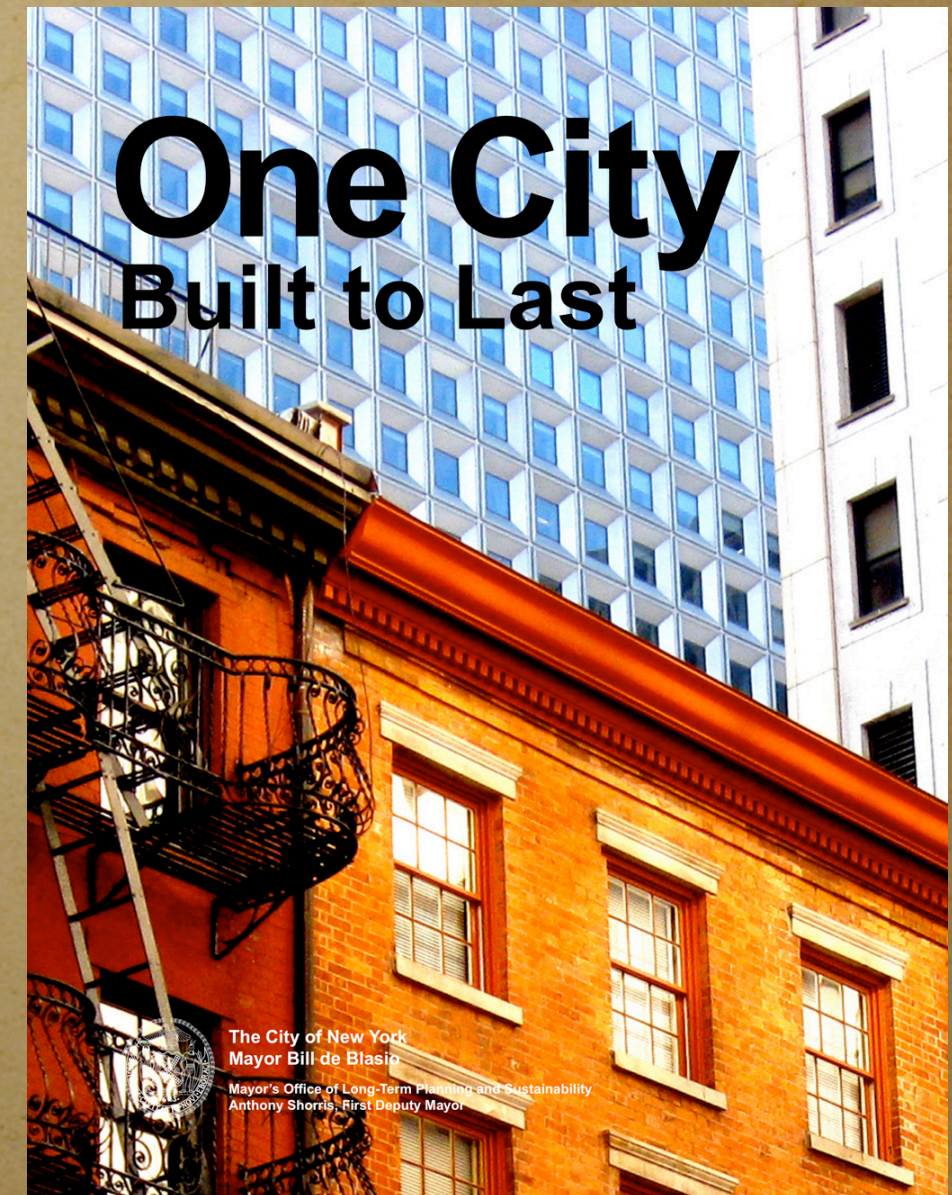
## Economic Transformation: Real Estate and Climate Protection



### Roadmap for moving to a competitive low carbon economy in 2050

The Hague, 8 March 2011

Peter ZAPFEL  
DG Climate Action  
European Commission



The City of New York  
Mayor Bill de Blasio  
Mayor's Office of Long-Term Planning and Sustainability  
Anthony Shorris, First Deputy Mayor





# Key Points

- Whereas climate protection in municipalities such as Austin has mostly been seen from the standpoint of lobbying government and utilities (public and private), in Europe and cities such as New York the issue is mainly seen as a matter of *economic transformation*. It is also more seen as a matter of public health than in the United States.
- In the EU the negative consequences of climate change are seen as a future economic inhibitor and potential social destabilizer.
- Doing something about climate change is also seen as an economic opportunity, not just a chance to do good or an environmental imperative.
- The politics of utility companies are reasonably well understood, including in cities such as Austin.
- The achievement of energy efficiency benchmarks based on hard data remains a challenge, including in the EU.



# Key Points

- Much of Austin's climate debate is too facile. Moving forward on this issue means having a firm understanding of our city's political economy.
- "Growth" as fetish:
  - Much is made of the fact that Austin's population is now one of the largest in the United States, but the sobering reality is that Austin's GDP is 32nd. The GDP of Detroit—a city in bankruptcy—is nearly three times that of Austin.
- Austin has now become the live real estate capital of the world. Any candid or meaningful effort to decarbonize Austin's contribution to climate change must come to terms with this political and environmental reality.
- If growth is to remain our mantra, the real challenge is this: how do we maximally decouple economic growth from greenhouse gas emissions?



# Key Points

- According to Austin's Climate Protection Plan, the city's built environment contributes over 50% of the city's carbon emissions. New York's percentage is even higher, about 70%.
- This is an issue confronting all cities. In 1950 there were 86 cities in the world with a population of more than one million. In 2016 there are now more than 500.
- The decarbonizing of buildings and other infrastructure must be seen as a political and social act in which everyone has a stake, not just as the responsibility of utility companies. The EU and NYC approach show what can happen when government both regulates and encourages conservation.
  - We must build better buildings and retrofit existing buildings for maximum energy efficiency. Luckily, such buildings also offer premium interior comfort.
- The European Union, its member states as well as cities such as New York have embraced Passive House as a cornerstone of their carbon reduction strategies. Passive House is now minimum code in cities such as Frankfurt and Brussels, and New York is requiring the standard for its new affordable housing projects.



# A New Business Model

- During the 2014 mayoral campaign Steve Adler, now mayor, spoke about how Austin's utilities would "require a new business plan" that went beyond selling power or water.
- Passive House combined with a properly structured and managed Feed-In Tariff can be one way Austin moves forward in *truly measurable* ways to combat climate change.
- It can also be a way to fight Austin's affordability problems and encourage housing preservation by allowing multifamily property owners and managers to generate additional income via rooftop solar or other micro-power generation.





**Rosewood Courts, 1954**

**Building 23,  
1142 Poquito Street  
Located atop  
Emancipation Park**







# A JEWEL IN THE VIOLET CROWN

A PEOPLE'S PLAN TO PRESERVE AUSTIN'S  
PUBLIC HOUSING



[WWW.PRESERVEROSEWOOD.ORG](http://WWW.PRESERVEROSEWOOD.ORG)

When it comes to leading on  
climate change AND affordable  
housing, government has the  
responsibility to lead by example.

Austin already has a New Deal and  
Great Society history of doing so.  
It can and should do so now.

Please vote to endorse the  
People's Plan.



# Passive House Retrofits and New Affordable Housing

## Passive House Construction

Yorkshire Wildlife Trust's *Stirley Community Farm Project* in Huddersfield, England.

EnerPHit certified Passivhaus retrofit of a derelict farm building to create a visitor and education center. Design & build led by Green Building Store.  
<http://www.greenbuildingstore.co.uk>

The approach in this case was to construct a super-insulated timber frame structure inside the existing Victorian stone building, preserving the outward appearance of the barn

Final airtightness results:  
0.31 air changes per hour @50Pa. A good result, especially given that the EnerPHit certification only requires 1 and Passivhaus requires 0.6.





# EnerPHit-Certified Passive House Retrofits

The use of Passive House components in refurbishments of existing buildings leads to extensive improvements with reference to thermal comfort, economic efficiency, absence of structural damage and climate protection. Reductions in heating energy demand of up to 90% have been achieved in a large number of projects.

Achieving the Passive House Standard in refurbishments of existing buildings is not always a realistic goal, one of the reasons being that basement walls remain as barely avoidable thermal bridges even after refurbishment.

For such buildings, the Passive House Institute has developed EnerPHit for certified energy retrofits with Passive House Components. This requires either a maximum heating demand of 25 kWh/(m<sup>2</sup>a) or alternatively the consistent use of Passive House components in accordance with the requirements for PHI certification of components. The heating demand calculated by the PHPP, and the quality of thermal protection of the individual components are indicated in the certificate.

EnerPHit certified structures are certified *in the same manner* as new Passive House Constructions. These retrofits can be installed in older buildings which *can or cannot* be insulated on the outside.

## Samples of EnerPHit Retrofits from the Passive House Institute

FYI: kWh/(m<sup>2</sup>a)=kilowatt hours per square meter per year

“Tons” an American HVAC industry standard, does not have a direct SI conversion. It is a measure of the cooling capacity, not the energy used.

