

Climate Change and the Planning Process Monash University - October 20, 2009

Introduction

Facts and Projections

1. Population and Growth
2. Geography and the Waterfront
3. Temperature and Sea Level Increases
 - a. Consequences
4. NYC's GHG Emissions
 - a. Overall 53.3M Metric Tons in 2005 – 1% of US emissions, putting NYC between Norway and Ireland in total GHG Emissions
 - b. Per Capita 7.1M Metric Tons/person – Compared to 24.5M Metric Tons average for US citizens, putting NYC between London and Toronto on a per capita basis

Place of Global Warming in NYC Planning Policy.

Despite the glaring fact of global warming and the consequences of climate change to a coastal city like NYC, global warming didn't factor in a systematic way into planning decisions in New York City.

1. Economic expansion, neighborhood preservation, congestion, and access to open space and light and air were the principal factors informing planning decisions.
2. While every land use decision in New York City requires an analysis of the environmental consequences of the decision before action, the consequences of or a project's contribution to global warming were not considered categories that could be analyzed or should be relevant to local planning decisions.
3. Approach has changed fairly radically since 2007, with changes stemming from two sources, one a change in regulatory policy at the NYS level, and the second a long range planning document issued by the Mayor of New York City.
4. Would like to set the stage by first discussing a major rezoning and infrastructure plan adopted by the City for Manhattan's West Side, then will introduce the changes in State regulatory policy and the City's land use policy introducing climate change into land use issues, then will head back to Manhattan's West Side to consider how the change in policy has changed the land use calculus in the area.
5. If I have time, will speak to other elements of the Mayor's strategic plan outside of the zoning context.

HUDSON YARDS ZONING

1. **Area:** Size, proximity to Midtown Manhattan, physical characteristics, overall underutilization of land.
2. **Development Compromised by three factors:**
 - a. Connectivity Issues – Rail Yards, Tunnel Access interfering with the NYC grid system
 - b. Lack of Mass Transit
 - c. Zoning – Manufacturing zoning dominates, with permitted densities generally ranging from 2.0 to 5.0 FAR
3. **2001 Team of 35 Report.**
 - a. Report on the economic health of NYC
 - b. Projected a regional demand for approximately 75 Million SF
 - c. Concluded that under current zoning, only approximately 30 M SF could be absorbed in New York City
 - d. Identified Hudson Yards as a logical place for expanding office development opportunities
4. Report ultimately resulted in a multi-pronged land use plan for the area with three principal elements:
 - a. Change in zoning from low and mid- density manufacturing to high density commercial
 - b. Commitment from State to expand the City's subway system into the area
 - c. Introduction of green space network throughout the area
5. The areas targeted for the highest density biased toward commercial, with base densities consistent with high density districts, but with incentive bonuses that run considerably above what is allowed in other areas.
 - a. Creation of a district improvement fund for helping to off-set cost of subway and green space improvements, as well as improved infrastructure systems for the area.
 - b. Additional rights to acquire development rights from certain sites targeted for open space improvements.
6. **Status of Plan**
 - a. Rezoning adopted in 2005
 - b. Subway extension both underway and on time
 - c. Condemnation and plans for infrastructure improvements underway
 - d. Development around the edges of Hudson Yards has occurred
 - e. Large Scale development envisioned along West 34th Street and Eleventh Avenue has not, but properties have been consolidated and positioned for development.

7. **No GHG Analysis** – Process of adoption of Hudson Yards did not in any manner consider is the effect of the project on GHG generation or the consequences of climate change to the project:
 - a. Allows for **full lot coverage** of buildings.
 - b. Did not consider solar heating/siting benefits
 - c. Required **significant car parking**
 - d. Considered **AQ concerns** from each building only from concept of whether emissions would have a direct adverse impact on residents of surrounding buildings
 - e. Energy analysis limited to a calculation of anticipated energy demands
 - f. No construction related fugitive dust, or energy reduction controls, or other environmentally sustainable measures incorporated into the plan.

8. Since Hudson Yards, two elements shifted, or at least added to the focus of planning decisions in New York City, one regulatory, and one pure policy.

NYS DEC Policy

1. In late 2007, the NYS DEP announced that it was developing a policy guideline for incorporating a Climate Change analysis into the environmental review of its own large projects (final draft guideline issued in April 2009)
2. Intended to have limited applicability, in essence to situations where NYSDEC serves as the “lead agency” for environmental review purposes; and where project would be a major stationary sources of air pollutants requiring a DEC permit, including electric generating facilities or other large scale projects.
3. While intended to be narrow in scope, the announcement immediately supported the claims of some commentators that “GHG” and the effects of “Climate Change” were categories of environmental concern that must be analyzed by government actions under the State Environmental Quality Review Act (SEQRA). SEQRA requires all NY State and Local governments and agencies to (1) analyze the environmental consequences of an action; (2) determine whether any of the effects rise to the level of significant adverse environmental impacts; (3) if there are significant adverse impacts, that mitigation measures are implemented to the extent consistent with “social, economic, and other essential considerations; and (4) that alternatives are considered that may address the environmental effects.
4. Because State DEC is the regulatory body for implementing SEQRA, the announcement of the impending guidance document for its own project made most environmental attorneys rush to incorporate a GHG/Climate Change analysis into its Environmental Review documents, even though no one knew exactly what the analysis should entail, and certainly didn’t have a sense of qualified as a “significant adverse impact”
5. And since the issuance of the DEC draft guidance document, the first case challenging the environmental review based on the claim inadequacy of the Climate Change analysis was upheld by the New York courts, based on a determination that the analysis conducted was adequate, thereby implying that Climate change analysis is now a required part of any EIS, at least for a large scale project.

PlaNYC 2030

1. 2007 also marked the release of the Mayor's PlaNYC 2030. The Plan started as comprehensive planning document for the long-term physical health of the City, something that arguably hadn't been done since the wholesale adoption of the current NYC Zoning Resolution in 1960.
2. As a planning document it covered most of the broad categories you would expect to find, and proposed both conceptual and practical goals
 - a. Providing rational housing and employment opportunities to accommodate and encourage the City's growth
 - b. Creating an open space policy that put passive and active open space resources within easy access to residential areas
 - c. Protecting and enhancing the City's water resources
 - d. Improving Air Quality
 - e. Enhancing Transportation Systems
3. But while starting with its focus on these elements, the planners working with the Mayor soon found that it was impossible to consider what makes a great City without also considering whether the power grid is capable not only of accommodating the additional growth, but also the heightened likelihood of longer heat waves and higher temperatures, or whether an appropriate contingency plan can be put into place when extreme storm events flood and close the City's subway systems.
4. This reality added a final element to the Plan, including a fairly sophisticated analysis of the nature and type of GHG emissions generated in and on behalf of the City, as well as the need for strategies for coping with the realities of the climatic changes expected to result in any event.
5. The CO₂ analysis showed that, unlike many other areas, 75% of CO₂ emissions stemmed from operation of the City's building stock, with transit and transportation comprising another 22% of the impact.
6. And as a goal, the Plan calls for a reduction in overall GHG emissions by 30% of current levels while accommodating growth.

- a. Avoiding sprawl – Attracting up to 900,000 new residents to the City in transit oriented communities, with adequate open space. Avoiding 15.6M metric tons of additional GHGs
 - b. Increasing Efficiency in Buildings through heightened energy standards for new buildings and required retrofits. 16.4M metric tons.
 - c. Improve electricity supply through upgrade of existing power plants and through the introduction of alternate power sources. 10.6M metric tons
 - d. Sustainable transportation through enhancing public transportation and improving efficiency of vehicles that City has some influence over, including its own vehicle fleet and the taxi and limousine pool.
7. At the end of the day, the Plan established 96 goals for the Physical growth of the City, 76 of which were classified as measures addressing or responding to climate change, and 96 implementation strategies. Some of the implementation strategies are complex, and involve multiple layers of government or require legislative change. Others are within the City’s control and are already being implemented, like converting what had been vehicle lanes to bicycle paths or high-speed mass transit route, and changing tree planting requirements for new developments and parking facilities to provide carbon off-sets and mitigate storm water run-off. Some are eminently logical, like targeting areas with ready access to mass transit for high-density development, and some are arguably loopy, like issuing an RFP for establishing new oyster beds in New York Harbor to help flush out toxins.
8. What the Plan clearly has done is change the calculus for planning decisions, and is evidenced by the City’s treatment of the Western Rail Yards presently going through the City’s land use process.

Western Rail Yards

1. Extension of Hudson Yards area; going through land use process as we speak.
2. Site itself approximately 13-acres, presently used as a storage yard for trains coming into and out of Penn Station
3. Proposed development would platform over the Rail Yard, with a mixed use, primarily residential development.
4. Both the zoning proposal itself and the environmental review conducted for the project responded to PlaNYC 2030.
 - a. Zoning:
 - i. 10 FAR density – less than 1/3 of the density allowed across the way
 - ii. focus on residential development, with an affordable component
 - iii. requirement that approximately 60% of the Site be open space and accessible to the neighborhood
 - iv. parking requirement eliminated and parking allowance reduced by 50%, with commercial parking reduced by 70%
 - v. bicycle parking made mandatory.
 - vi. incentives for building shapes to provide for solar screening
 - vii. reference to an environmental declaration.
 - b. Environmental Review resulted in a series of detailed requirements incorporated into a restrictive declaration:
 - i. Commitment to a “LEED Silver” standard for development
 - ii. Implementation of best practices during construction (DFP filters; early electrification; wheel washing; recycled materials; storage and containment requirements)
 - iii. Flood Plain Criteria
 - iv. HVAC requirements (location of stacks; fuel type)
 - v. Energy Savings commitment (14% over current ASHRAE standards)
 - vi. Green Roofs
 - vii. Energy efficient fixtures
 - viii. Enhanced Storm Water retention and detention requirements
 - ix. Commissioning and Verification requirements.
 - x. Environmental Monitor to oversee implementation of measures
 - xi. Implementation of car-sharing program

Next Steps for City

1. Establish a regulatory agenda providing for a uniform approach to GHG and Climate change measures.
2. Continue efforts to interest the State in cooperating in City initiatives
3. Coordinate with the MTA in terms of overall transit policy.
4. Finalizing a comprehensive adaptive strategy for addressing lower lying areas within the City.