

Building Demand for Efficient Buildings

Lessons from the EU's Energy Disclosure Regime

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Roadmap

1. Why focus on existing buildings and energy disclosure?
2. What instruments has NYC implemented thus far to promote energy disclosure and how do they stack up?
3. What lessons can we learn from the EU's disclosure regime?



Why focus on the existing building stock?

- 90 percent of the buildings that are here today will still be here in 2050.¹
- Cannot achieve deep carbon reductions by focusing on new construction alone.
- Need retrofits ranging from lighting upgrades to upgrades of steam heating systems.

¹(NYC Roadmap for 80x 50)



What are the policy options?

Two main types of instruments available:

- Mandatory retrofit obligations
- Market-oriented policies
 - e.g., energy disclosure requirements



The Case for Building Energy Disclosure

- The “Energy Efficiency Gap”: The market has failed to adopt many energy efficient technologies that would produce economic savings.
- Market failures, including information deficits, appear at least partly to blame.
- Two types of information deficits in building sector contribute to the energy efficiency gap:
 - Lack of awareness among building owners
 - Asymmetrical information between landlords and renters, as well as between sellers and buyers

Why do information asymmetries matter?

- Purchase market: Buyers will not be able to distinguish efficient from inefficient properties, leading to inefficient pricing.
- Rental market: building owners may not have an incentive to improve efficiency of property if the savings will benefit the tenant (“split incentive” problem)
- There is compelling evidence that split incentives/information asymmetries contribute to the energy efficiency gap:
 - E.g., Owner-occupied homes in California are 20% more likely to have ceiling insulation (Gillingham et al., 2012).

How does NYC's Disclosure Regime Stack up?

- NYC does a good job tackling information deficits among building owners* but is not doing enough to reduce information asymmetries.
- The EU's energy disclosure regime indicates how to better tackle information asymmetries.

*To the extent that LL84 and LL87 apply.



Current Policy Landscape in NYC

- Local Law 87 (energy audits)
 - Owners of buildings with more 50,000 ft² of space must conduct a detailed energy audit every 10 years
- Local Law 84 (benchmarking):
 - Owners of buildings with more than 50,000* ft² must annually report building energy and water use as well as Energy Star rating.
 - Information is reported to the Department of Finance and made available to the public online.

*will be lowered to 25,000 ft² in 2018.

The Critique of Local Law 84

- Local Law 84 was a trail blazing ordinance
 - When enacted, floor area covered by LL84 was greater than that covered by all other municipal benchmarking laws in the U.S. combined
 - LL84 makes information available online, a critical improvement upon past regimes
- But the law is falling short of its potential because the information is not effectively communicated to the public
 - Data is buried on a government website on a 100-point scale that's hard to interpret
 - Many brokers are unaware the data exists and prospective tenants/buyers rarely ask for it

The European Union Disclosure Regime

- Two major innovations:
 - (1) Energy performance scores must be included in advertisements offering property for sale or lease
 - (2) Energy performance scores must be posted in a place that is visible to the public (applies to buildings > 500 m² that are frequently visited by the public)
- These requirements have been in effect throughout the European Union since January of 2013 (Directive 2010/31/EU)

Visuals: Building Labels

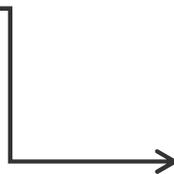


Visuals: A Danish Real Estate Advertisement



| | |
|---|--|
| Sidste udbudspris | Udbetaling |
| 3.795.000 kr. | 190.000 kr. |
|  Hvad er boligens aktuelle værdi? Træk vurderingsrapport, klik her | |
| Kvmpris | 36.490 kr./m ² |
| Prisændring |  -5 % |
| Type | Ejerlejlighed |
| Bolig | 104 m ² |
| Værelser | 4 |
| Etage | 3.sal |
| Byggeår | 1898 |
| Oprettet | 17-10-2012 |
| Liggetid | 72 dage |
| Sidst set | 28-12-2012 |
| Energimærke |  |

Energy Score



An evolving regime...

- The EU regime didn't always require such broad publication of energy scores
 - Directive 2002/91/EC required energy performance information to be:
 - “Shown” to prospective buyers and renters and “handed over” after sale/rent
 - Displayed in buildings with useful floor area greater than 500 m² that are “occupied by public authorities and frequently visited by the public”
 - Studies in late ‘00s indicated equivocal impacts
 - Evidence that energy scores were not systematically shown to prospective buyers and sellers
 - Ambiguous price effects
 - → expanded publication requirements

The policy change was impactful

- Since advertising requirement took effect, studies have found that buildings with higher energy grades command price premiums.
- Danish market shows dramatic impacts (Jensen et al, 2016):
 - Denmark has required energy benchmarking since 1997.
 - Only began to see meaningful price effects in July 2010, after advertising requirement kicked in.
 - Prior to July 2010, properties with high grades (A,B,C) sold for average of 2.4% above low rated properties (E,F,G)
 - Since July 2010, properties with high grades have sold for average of 10.1% more than low rated properties.

In summary

- By targeting prospective buyers and renters early in their search process, Denmark significantly increased the impact of benchmarking scores.
- New York City and the US require targeted disclosure to prospective consumers in other contexts:
 - Energy efficiency scores on appliance advertisements
 - Health grades in restaurants
- Why not building efficiency scores too?



Thank you