NYC’s Ambitious Energy Code
How Does It Stack Up?

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WHY ENERGY CODES?

science

Theory

design / engineering
REGULATING SYSTEMS

Buildings – largest consumer with many stakeholders

What’s our metric?

- Transport: 34%
- Buildings: 39%
- Industry: 27%

Proportion of US energy annual consumption

0% 25% 50% 75% 100%
TIGHTENING ALL THE SCREWS
1. Encourages design innovation and education throughout industry
2. Communicates progress toward energy goals
3. Helps to lower actual energy usage
WHO ARE THE INNOVATORS?

San Francisco

New York City

London

Brussels

Frankfurt
New York City

- Mandating best practices
- Blower door testing in 2016 update
- Moves market in right direction, some discomfort in learning process
European Union craftsmen and labor education program

- 30 countries participate
- Identify and fill skill gaps to meet 2020 targets (NZEB)
- Best practices aggregated and standardized for all
COMMUNICATING PROGRESS

New York City

- LL84 – Benchmarking
  - How much energy does your building use each year?
  - Metered.nyc →

- LL87 – Energy Audits
  - What is using energy in your building?
COMMUNICATING PROGRESS

The ‘Business-as-Usual’ case projected 1% / year GHG growth.

- **6%** reduction in energy
- **8%** reduction in ghg emissions

For buildings benchmarking all 4 years.
London

- Building labeling – similar to NYC restaurant grades
- Incorporate minimum energy performance at sale or lease
ENERGY CODE EVOLUTION

New York City

Prescriptive  Performance  Outcome Based

San Francisco  Frankfurt
SAN FRANCISCO

Title 24 and Time Dependent Value

• Aiming for net-zero in 2030
• Code designed for whole-building energy simulation
• Energy metric tied to cost of delivery
Pushing Performance

• Aiming for carbon neutrality in 2050
• Graduated from prescriptive 15 years ago – focus on energy
• Passive House certification mandatory for public buildings*

*designers can get out of the mandate by designing to 30% below base building

**Brussel’s has taken this a step further!
OUTCOME BASED CODE

1. Helps to lower actual energy usage
2. Maximizes innovation and enables enforcement
HOW WE STACK UP

We’re doing well, but there’s room for improvement:

• Education
• Communication
• Simplification