

## Beyond the Energy Code: Exploring the Value of Foraging Ahead

Thursday 6/16/16, 10:30am

- Barry Hooper, Green Building Environment Manager, SF Dept. of the Environment.
  - How do we address existing buildings?
    - SF one of the places addressing existing buildings and their performance
    - SF today- robust economy, housing crisis
      - Ongoing challenge- bound on 3 sides by seawater
      - Regular occurrence is a storm surge over seawall
      - BART system.
      - Goals and success in meeting and exceeding Kyoto protocol.
    - Better engage the public- “0 50 100 Roots”
      - O waste by
      - Roots capturing carbon and putting it back into the ground.
      - 50% of trips in anything other than a single occupancy car
      - 100% renewable energy
      - PG&E delivering efficiency services for last 15 years.
    - What was missing was Data-
      - That was the driver for SF to adopt a benchmarking and audit ordinance
    - The bulk of the built environment and the real challenge is the private sector:
      - Opportunity to invest 60 mil in 817 audited buildings
      - Very helpful to have examples
        - Not enthused w/ mandatory audits
    - The entire commercial market throughout SF- there isn't a choice between environment and economy. The ordinance did not create 11% greater employment. 2% reduction in gross energy use.
      - It's important for the city to put data in context and learn from/compare with peer cities.
    - Takes into account climate and location.
- Billi Romain, city of Berkeley.
  - Primarily a built out city with little room and lots of opposition to new buildings.
  - New approach- national trend towards benchmarking to increase energy transparency, and let people know what to expect from an energy upgrade, roadmap
  - People though that when they were compliant they were efficient, but really had just met bare minimum.
  - Targeted savings approach to see how this new ordinance would result
    - We don't know that we are going to meet 25% goal but that's is our target. Focus on conversion rate.
      - Not let lack of info keep us from adopting policy.
    - Also differs because of compliance triggers
    - Delay w/ online payment
    - The ordinance was sported to correspond w/program.
    - If they've already done EUC they don't have to do the assessment
    - Really important for realtors to not have something that delays the sale.

- 2/3 deferring sale to buyer.
    - 3 types of assessments for homes:
      - Home energy score
      - SnuggPro
      - Optimizer
    - Relationship between home inspectors and realtors sold this route. We could not do program w/o home energy score someone else is doing the training/ service provider interface.
      - Really good at settling people into EUC program
  - Found info out about housing stock
    - 5-7% of the homes do have cooling
  - Trying to find other ways to reach new buyers out of those they have been able to reach, 50% have benefited.
  - Data on what the most recommendations are
    - Allows for future rebate development
  - Measuring success
    - Can't tell who moved forward with the program, only who was exposed to it.
    - Just starting to get the data we need to make policy recommendations moving forward
- Hilary Firestone, LA
  - Adopted LEED as standard for LA, then switched the CAL Green
  - Adopted reach codes
    - Cool Roofs
      - Urban heat island reduction
      - Had to get it approved locally and then by the state to use locally.
    - Water
      - Amend codes for water savings
      - People thought there was nothing else you can do.
        - Suite of measures adopted just this month on water reductions.
      - Data- getting information to residential and commercial tenants about their water use.
        - Sub meter existing buildings is a place to start
      - 10 different code requirements
    - Existing buildings
      - How do we make improvements?
      - LA adopted energy target reduce by 20% by 2020
      - Next step is developing policy and plan to meet them.
    - CA state mandates,
      - Complying with those
    - Buildings largest user of energy and emitter of GHGs
  - LA playing catch up with other cities in the state and across the country
  - What we can learn from other Cities;
    - SF and Berkley already adopted theirs
    - Look at other cities

- Create transparency with data (building and water)
    - Trigger action (actually make upgrades they learn about)
    - Ensure continuous improvement
  - Kicked off stakeholder process
    - 200 people in city hall
      - Huge interest in community.
    - Dialogue meetings to see what's the best for the city of Los Angeles.
    - Council approved proposal, Hoping to have it adopted official y by the end of the summer.
  - Focused on large buildings, which are all over the city of LA
    - Not targeting any area in particular
  - What's in policy?
    - Water & Energy
    - Transparency
    - Triggering action and continuing progress
    - Retro commissioning
    - Policy designed to try to be flexible. Supporting building owners to take action.
      - Make them aware and show them the value.
- Javier Mariscal-
  - Why reach codes?
    - AB32
      - CA air resource board
      - Why utilities are involved.
      - EE has been called out as important
      - CPUC regulates utilities
      - Mandate says why we are in
    - 2005 was the start of reach codes
      - Cities just did it on their own, 14 cities
    - 2008
      - 48 cities- why we want to reduce GHGs but didn't know how much they reduced.
    - 2013
      - 8 cities- no one took us up on cost effectiveness studies
    - What's the reason for the shift?
      - Shocked by process they have to go through to be legal defensible. Process to do this was the 1<sup>st</sup> tool given to them
      - Cost effective-ness studies by climate zones. – major win
        - 16 studies cover over 500 jurisdictions
    - Cost Effectiveness studies
      - CalGreen Tiers
      - Ex, Cool Roof, outdoor lighting, radiant barrier (Roofs)
      - Gives you idea of where statewide program is heading.
    - Title T24: Part 6 versus Part 11
    - 6-energy code

- 11- CalGreen (says refer for part 6)
      - What's driving calgreen is energy
      - Working harder wit the CEC
      - - let's do the cost effectiveness study upfront, just pass the ordinance and we're done.
      - CalGreen Advocacy would say a lot of time and frustrations
    - Tracking Goals- how did those reach codes contribute to goals?
      - Everyone's constrained when it comes to resources, simplicity is key.
    - Public policy has to be approved by elected body.
      - We're the technical side
      - The advocacy and championing of the cause has to come from you.
        - Education and how it ties in to Climate Action Bill
- Comments and Questions-
- Kim Springer, County of San Mateo. Always hearing so many % above T24, is anyone using a scale that is counting us down from zero?
  - That is a burning question. How do we get there? T24 and code mean different things Z&E. The CEC software coming out Jan 2017 (photovoltaic) energy design raining of 0. TDB has 3 definitions:
    - Site Source
    - Site specific
  - SF is leading, but it's a gargantuan challenge because we don't know yet. CEC has to agree to it b/c they are the ones authorized to create and pass the energy code.
  - Is it even possible to get to Z&E with existing buildings? It might not be but trying to will be huge in terms of savings.
- City of Chula Vista, Cory Downs: Can you talk a little bit about the striping away of requirements, is that political?
  - Originally the real estate community wanted us to move away from point of sale. It would still be a lot to phase them in. We were willing to figure it out though. 89% of the city of Berkley voted in favor of the CAP. Let's do time of sale going first and see how it goes.
  - Minimum measures- people feel like they met the requirements and don't go beyond that.
  - Requirement at time of sale, 75% of people do a couple thousands of dollars already, Minimum measures got too complicated.
- Kristin LA County
  - Thanks for getting it going Hilary, a lot of cities don't want to be the first ones.
  - Since you have adopted extra reach codes, how have you seen the building community respond? Any push back or success codes?
    - Hilary- push back always happens before it's required, and then once it's passed there's reluctance but compliance. The hard part is collecting data. Sometimes

we find there's more rebates than people who have pulled permits, which doesn't make sense

- LA county- Public health, overall reduction to urban heat islands. How do you measure reduction of urban heat island? At the end of the day it still has to go through our energy code and through public works.
- Sergio- cool roofs, project on heat island reduction. UCLA studies to measure projected temperatures.
- Cool roofs In LA- new construction and major renovations. Creating a program to get building owners to voluntarily update their roofs outside of these projects
- Jordan Decker- coordinator info- research on urban heat island reduction data, Chicago.
  - Despite challenges people are moving forward. Building industry champions, what value do they see in this?
    - In SF the existence of the CAP is a motivator, elected officials
    - In LA, building owners who are already doing it are the champions. We're considering project but did an audit and saw the value in it. Obvious champions are the companies doing the work in the buildings- job creation- you need a physical person there changing the lightbulbs.
    - Berkley- try to fill a gap with our policies. Emphasize hundreds of thousands of energy efficiency dollars brought into the community.
  - Daniel
    - White house health care plan ISD, LA County
    - Your intake on getting message across- Pavement is not governed by building code and is owned by many agencies-
      - City of LA has own materials testing lab
      - Can see data and measure over time.
      - Result of sustainability plan
        - Trying to work on it though projects rather than code
  - CEQUA- environmental checklist- what impact will this have on schools, housing, traffic, etc. What is the impact on GHGs on a project by project basis?
    - If you establish a lower threshold, it's one way to push for a reach code as a way to comply with CEQUA
    - It's a tool that's underutilized
      - Talk to planning dept. Passed in recession when depts. We're significantly understaffed, they might not even be up to speed on how they can use it.
- Susan Davidson CalSearch
  - Ahead of the curve in this discussion, quantifying data- easy in solar, Still too far ahead in this conversation.

- In some ways kind of frustrating. Like an 8 year old w/ a loose tooth. If there is one thing you would change?
  - Barry- rethink our privacy rules regarding energy data
  - Hilary- greater alignment between state and local. Mass education and transparency
  - Billi-focus on being able to look at 0 net emissions. Berkeley- natural gas and clean energy
  - Javier- utilities- if we could have a forum where we can hear your voices on a regular basis. Can we play a role and create a metric, share ideas and best practices.