

Energy Finance for Real Estate

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An Urban Land Institute Policy and Practice Forum

Organized by:

The ULI Climate Change, Land Use, and Energy
(CLUE) Initiative

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Coordinating Organizations

The Clinton Climate Initiative
Initiative for Responsible Investment at Harvard University
ULI New York District Council
ULI Daniel Rose Center for Public Leadership in Land Use
ULI Center for Capital Markets and Real Estate



District Energy in the U.S. Promise and Obstacles

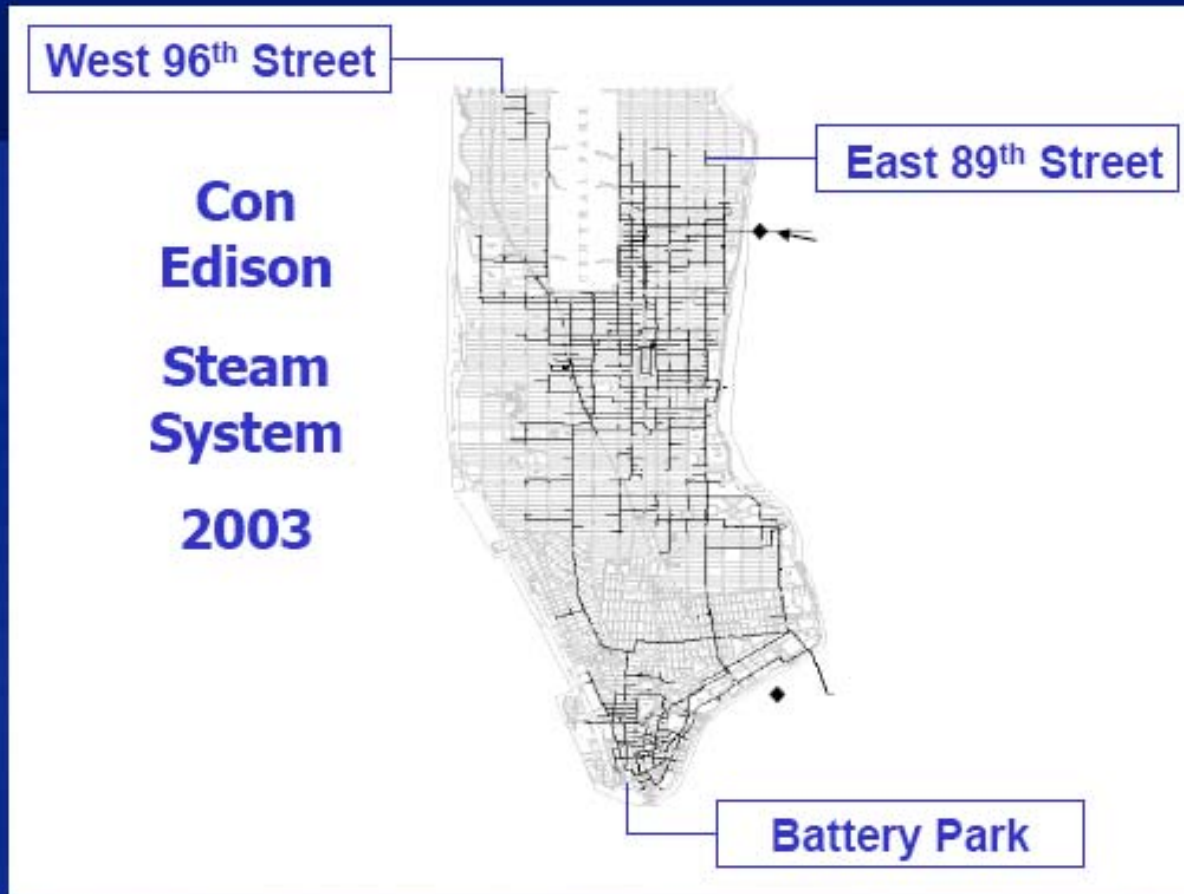


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District Energy in the U.S.

- **Campus Systems**
 - 5800 around the U.S.
- **Urban Systems**
 - 68 systems (noteworthy examples: Nashville, Tennessee; St. Paul, Minnesota; Austin, Texas; and the Trigen Systems – Trenton, New Jersey is an example)
- **New York Steam System**
 - World's largest district energy system



Legal Structures for District Energy

- Regulated Utility
- Private Company (LLC or Other)
 - New cogeneration exceptions
- Municipal Utility
- Cooperative
- Special Taxing District
- Business Improvement Districts
 - In most cases state enabling legislation does not allow for electricity sales

Legal Structures for District Energy

- Campus System
 - Generally speaking, no legal restriction on distribution of either electricity or thermal energy on a single landowner's property
- Urban Systems (without local electric distribution)
 - No federal restriction on sale of thermal energy
 - Generally speaking, state law does not restrict sales of thermal energy
 - Main legal issue re thermal energy is local permits for conduits (assuming the anchor power plant can otherwise be permitted)
 - One or more anchor plants must interconnect into the existing DSCO grid (or bulk transmission grid)
 - Local DSCO interconnection difficult
 - Bulk transmission system
 - ISO queues

Urban Districts (with electric distribution)

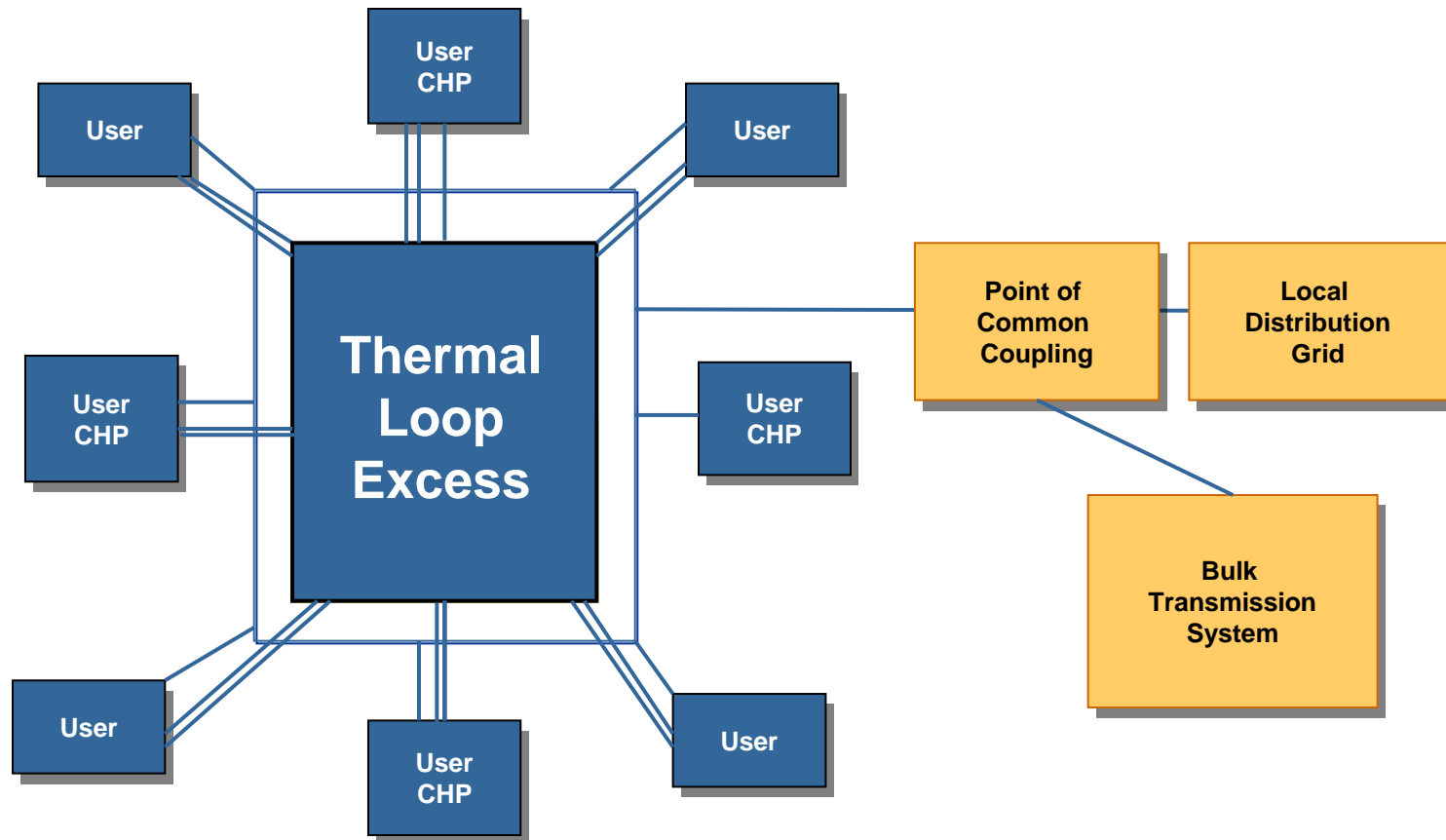
- Electric distribution infrastructure and sales of electricity – Complex array of federal, state and local laws and regulations that have the effect of creating serious obstacles to the development of district energy in the U.S.

- Power Sales to Users in District
 - Franchised utility
 - Franchises granted either by state or municipality
 - District Energy company can be an investor-owned utility, like Con Edison in New York

 - May or may not be exclusive
 - If exclusive, no possibility of additional distribution wires in territory
 - If not exclusive, theoretically possible to install new wires but many states require a demonstration of the necessity and convenience of the (partially redundant) system before the state public service commission
 - Some states require consent of adjoining utility

Microgrid

(multiple distributed generators)



Microgrid Structures

- **Municipal Utility**
 - Most state laws allow municipalities to create their own utilities
 - Usually no obstacle to installing power generation to serve public buildings
 - Installation of distribution wires across public ways subject to same exclusivity considerations mentioned above
 - Municipalities can in theory create a parallel public utility or municipalize existing infrastructure
 - Most state laws require public referendum to create a municipal utility

Microgrid Structures (cont'd)

- Special Taxing Districts
- Private Company (LLC)
- Recent Developments in Cogeneration
 - N.J. Stat. Ann. § 48:3-51
 - Enacted in 1999 to exempt from regulation electricity sales by on-site generation facilities to “contiguous” end use customers, which includes customers separated by *an* easement or public thoroughfare.
 - Amendment effective January 16, 2010 extended the definition of “contiguous” to include end use customers purchasing thermal energy services wherever such users are located.
 - N.Y. Pub. Serv. Law § 2
 - Exempts from regulation cogeneration facilities 80mw or smaller and the distribution of energy to users located at or near such facilities.
 - Burrstone Energy Center 2007 declaratory ruling by the N.Y. Public Services commission - determined that cogeneration facilities were permitted to distribute energy to multiple end users and that the facility’s distribution lines were permitted to cross public streets in order to do so.

Integrated Urban Planning (Zero Net Energy Development)

