**Zero Energy Commercial Building Consortium: Tenant and Owner Working Group**

Commercial buildings, both new construction and existing buildings, have been an energy efficiency challenge for decades. They cover a diverse range of building types, financing structures, applicable building technologies and a lack of publically available building and system performance data. Moreover, commercial office buildings involve a variety of market actors, and often the cost and benefits of energy efficiency are split between owners and tenants. Leases cover relatively small spaces in multi-tenant office spaces, and are sometimes of short duration which makes increased cost of efficiency difficult to justify. Plus, the tenant improvement process is quick, thus not allowing significant time to research and analyze technology that might be required to support energy efficiency or net zero energy.

Add to that the fact that most existing commercial buildings were built when energy prices were low and unlimited energy supplies were assumed. Energy efficiency, quite simply, was not a priority in building and system designs, particularly from the mid-1960s through the mid-1970s. Not surprisingly, there were no market- or legislative incentives to develop and incorporate building materials, technologies, or systems that would limit energy usage. Buildings of the era characteristically feature single-pane windows, non-thermally broken metal and glass curtain wall systems, lack of natural ventilation capability, lighting used as heat generation, ozone-depleting HVAC systems that are aged, oversized and inefficient and, as such, are truly energy hogs and significant contributors to GHG emissions.

Despite successful market-based programs that support sustainable design, few new buildings are energy efficient, much less net zero energy. When you consider that the share of the total commercial building stock that is newly built is only 1-3% annually, it is imperative that net zero energy address existing buildings, not just new construction.

Owners of commercial properties and investors are beginning to embrace new and existing innovative technologies providing high efficiency energy optimization, thereby increasing bottom line profits and value of their assets. Proving the Return on Investment of these technologies will help create the link between energy efficiency and increased asset valuation.

The Tenant and Owner Working Group was convened to:

- identify and characterize the market barriers of the owner-tenant relationship in achieving net zero energy in existing and new construction commercial buildings;
- assess the policies and programs implemented to date;
- identify the characteristics and strategies of successful program implementation; and
- recommend approaches that may warrant additional resources or investigation..

**Tenant and Owner Market Barriers**

*First Costs* - First costs continue to be a barrier to the adoption of energy efficiency strategies, even when lifecycle costs would decrease overall costs. Capital improvement budgets are separate from operating budgets, and few owners are fully aware with how energy performance factors into the bottom line and asset valuation. In multi-tenant buildings, first costs can be further complicated by the short duration of leases.

*Split Incentives* – Otherwise known as the 'principal agent market barrier' split incentives in leases are a well documented barrier to energy efficiency. Who pays and who benefits from energy efficiency depends on the terms as outlined in the lease contract. In addition to leases, other contracts in commercial real estate also create split incentives that prevent widespread adoption of energy efficiency. These include property management agreements, due diligence, underwriting standards, broker contracts, etc.

*Informational Barriers* – A number of informational barriers prevent the widespread adoption of energy efficiency. These include a confusion and/or lack of available information about:

- energy use in buildings, especially in tenant spaces,
- costs and benefits of the design, construction and energy use associated with various energy conservation strategies, and
- incentive programs and tax deductions to help offset costs of energy efficiency improvements.

*Tax Policy* – Tax policies, specifically depreciation schedules, may prevent investment in energy efficiency.

*District Energy Policy* - Lack of policies and mechanisms to support district energy systems.

**Opportunities and Recommendations**

*First Costs* - While noted by the Owner and Tenant Working Group, the first cost market barrier is being addressed by the Finance Working Group.

Recommendations:

Implement the recommendations of the Finance working group.

Encourage the use of Net Present Value and Return on Investment as the appropriate metrics to evaluate costs and benefits associated with energy efficiency.

Encourage green leases to clarify who incurs the first costs and ongoing energy savings associated with the installation of energy conservation measures.

Split Incentives – In order to address the split incentive, corporate real estate contracts should specify the measurement criteria and the performance levels sought. While there is no such thing as a 'green lease', the commercial real estate industry is beginning to include language about sustainability inserted

into leases. Today, this language may or may not address energy performance. However, it seems that owners and tenants are beginning to understand that it is in their best interest to clarify who pays the costs and receives the incentives and 'energy' benefits of efficiency.

Property management agreements should also clarify criteria and levels of performance sought. This might include contract requirements for benchmarking, annual energy audits, staff training, tenant engagement, and research of alternative financing mechanisms available to the building for efficiency improvements, such as utility incentives or tax credits. Requiring that energy use and performance be included in any monthly, quarterly, or annual reports to the ownership will also Increase the visibility of energy performance among asset owners and managers.

Due diligence is the process of investigating the finances, operations, management and structural characteristics of a building before an offer to purchase is made. Due diligence might expand in scope to include investigations into the energy performance of the building and opportunities for improvement.

Underwriting is the process that financial institutions and investors use to evaluate risk and assess whether or not to grant loans. However, the value of efficiency and energy conservation measures have not before been assess by financial institutions. These important market actors will require an increase in fluency in energy efficiency and the value that it can add to corporate real estate before granting loans to pay for efficiency.

Recommendations:

Explore other common commercial real estate transactions to learn more about how they explicitly could address and incorporate opportunities for improving energy efficiency. These include development agreements, service contracts, broker representation agreements, asset management contracts, and insurance agreements.

Encourage the development of standardized protocols for reporting energy performance and any opportunities for improvement that can be used during the due diligence and/or underwriting processes.

Develop and promulgate guidance to owners and tenants on what should be considered as part of a 'green' lease that supports enhanced energy performance. This type of guidance already exists at BetterBricks.com.

Support research that clarifies the link between energy efficiency and building value.

*Informational Barriers: Energy Disclosure* - The advent of transactional energy disclosure regulations provides a platform to support public policy objectives focused on identifying and addressing energy inefficiency and the means of remediating such inefficiencies in the US commercial real estate building stock. The transparency created by such disclosure will identify potential valuation impacts and facilitate the negotiation of energy efficiency remediation investments into routine commercial real estate transactions.

Disclosure regulations now being implemented in various jurisdictions focus on triggering events typically connected to the sale, leasing or financing of a property. Until commercial practice amongst landlords, tenants, lenders and building owners adapts to these new regulations, there will be challenges in accessing energy consumption history information which is critical to complying with these

regulations. Utilities will play an important role in recognizing the need for access to this information and providing administrative processes for efficient accessibility. Most notably in scenarios where a building tenant maintains a directly metered means of tracking utility consumption from its respective utility vendors, landlords may not have the right to access such information. Thus, a landlord involved in selling or refinancing its property or offering it for lease to a prospective tenant, may not have access to the information it needs to comply with the regulatory obligation. Some jurisdictions, most notably, New York City have incorporated into their regulations a tenant obligation to routinely disclose its utility consumption information to its landlord. Landlords are now evolving their practice in the development of new leases to require such disclosure of tenants on a routine basis. This is one of many "green lease" provisions becoming increasingly utilized in routine lease drafting.

Recommendation:

Support the disclosure of energy performance information upon sale or lease of properties. Also support regulatory approaches such as the one implemented in New York City which require routine disclosure of energy consumption information from tenants to landlords as well as other means of assuring that building owners have access to such information in order to meet regulatory obligations.

Create standardized 'benchmarks' that allow tenants to compare their energy performance to other similar spaces, taking into consideration occupants, energy intensity and hours of operation.

*Informational Barriers: Finance* – Many owners and tenants are either unaware or choose not to participate in available programs that provide financial support for energy efficiency. These include a wide variety of incentive programs including utilities and public purpose fund rebates, state and federal tax credits. Incentives often do not cover the full incremental cost of energy conservation measures and since many corporate real estate owner's assets are in many different utility districts, often the time associated with learning and applying for incentives in each utility district is not worth the effort. Programs are confusing, offer few opportunities for scaling to a portfolio of buildings, and compliance tools vary as much as the programs, adding to the cost of securing incentives.

Recommendations:

Support increased financial incentives and tax rebates to support energy efficiency.

Encourage streamlining of utility incentive programs across utility service territories. Consider joining and encouraging other utilities to join the Office of the Future Consortium of utilities who are working to increase commercial real estate participation in utility programs and encourage deep energy savings in multi tenant buildings with a common platform for incentives across multiple utility districts. The strategy includes attempts to directly address the split incentive by pre-certifying buildings for incentives and enhancing tenant guidelines to include site specific energy conservation measures that would automatically qualify for incentives.

Continue supporting the DESIRE database of utility incentives.

*Informational Barriers: Design* – Typical leasing and tenant improvement process involve a large number of market actors, few of which are technically savvy. Energy modeling tools are not always used largely

because they require a high level of sophistication that may not be available for small buildings. Furthermore, the industry lacks the robust and ongoing monitoring and verification that is necessary in order to provide feedback to the design community on strategies that improve energy performance of commercial buildings.

Recommendations:

Implement the recommendations of the energy performance, feedback and verification group.

Support "2030 District Planning Committees" in prioritized geographical areas. This can be based on the model as established in Seattle. The Committee is an interdisciplinary public-private partnership working to create groundbreaking high performance building district in downtown Seattle. They are developing realistic, measureable and elegant strategies to assist district property owners, managers, and tenants in meeting goals that aggressively reduce environmental harm from facility construction and operations. By working within one climate district, building owners can share tools, district solutions, information and lessons learned on climate responsive design solutions.

Continue federal support for the High Performance Building Database. Consider expanding the database to include information on measured performance and costs associated with particular strategies.

*Tax Policy* - Tax depreciation schedules can be an impediment to energy efficiency.

Recommendation:

Conduct a formal review of federal tax policy to better understand how this may preclude energy efficiency.

*District Energy Policy* - In a traditional structure, financing is segregated between the building core and shell and the district energy. A typical commercial building has its own energy conversion plants (chillers, boilers, furnaces) that serve only the heating and cooling energy needs of the building itself. In a Climate Benefit District, the district spans the boundary with the efficiency structure integrated into the buildings - district wide green infrastructure and green power production on site. The building efficiency and generator components support the entire district. From a financing perspective - it looks to a district wide investment profile rather than to the individual buildings, essentially aggregating and monetizing the difference between neighborhood baseline energy and high performance use. Essential components for success include demand reduction through building efficiency, new supply through recovery and generation and neighborhood (public realm) integration.

A Climate Benefit District (CBD) through a managing entity, similar to a homeowners association which operates the district, can receive and distribute revenues, and is a financeable entity providing access to capital for high-performance, district level infrastructure and shared facilities. Each building within the district would provide efficiency for the benefit of the whole. Property owners would benefit from revenue sharing, after debt service, from the monetization of excess efficiency the district.

A CBD creates a priority investment site that leverages public and private resources to manage growth

pressures and improve environmental performance. Public/private resources might include: government bonds, local benefits charge on property owners, and distributed portfolio of sustainability devices. CBDs can aggregate and smooth efficiency performance thus creating a more reliable and consistent resource supply and financial returns. This reduces the aggregated cost across the district.

Some obstacles to creating CBDs are that they:

- may require legislative approval to form a benefit district.
- need to demonstrate a consistent return on investment that attracts the right mix of public and private financing.
- are only financially successful if properties are operating at peak efficiency, which is impacted by occupancy, use, load variations and maintenance.
- have unclear return requirement threshold for investors/lenders/bondholders.
- do not currently provide a mechanism to appropriately allocate benefits between property owners, which is also affected by occupancy, use, load variations, and maintenance.
- will likely need to be collateralized through contractual agreement with the district rather than a lien on real property.
- are difficult with relatively short building ownership durations, which lead to the need to develop protocols for rights and obligations upon property transfer.