Green Lease Research Summary

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Introduction

Alameda County has a long history of addressing the environmental and health impacts of the buildings we own and operate, as exemplified by our Green Building Ordinance adopted in 2003 and our transition to green cleaning practices in 2007. In order to extend these and other successful efforts to facilities we lease, the County's Sustainability program partnered with the Real Property Management division (both housed in the General Services Agency), to develop green lease specification that ensure the County's sustainability initiatives are implemented by property managers in the facilities we lease.

Leased facilities constitute a significant percentage of the County's overall operational greenhouse gas emissions (as of 2003, 9%¹). As of 2014, Alameda County has 49 active leases in 32 buildings totaling over 1 million square feet, housing a variety of County departments. Leased space constitutes about 12% of total space that Alameda County operates in, and about 35% of total *office* space (excluding jails, warehouses, etc.).

As part of Alameda County's efforts in greening leased facilities, we investigated the opportunities and challenges for sustainability that are specific to the leased environment. This includes research on the incentives of landlords, property managers, and tenants to implement sustainability initiatives, and public sector best practices and market availability of green products and services for leased facilities. This paper summarizes our findings, with the dual purposes of providing insight regarding the development Alameda County's green lease strategy, and providing a resource for other public agencies on potential strategies for implementing green leases.

First, we will provide an overview of the concept of green leasing. Next, we'll discuss the non-environmental benefits of green leasing, and other potential incentives for a landlord to develop a greener leased space. This paper will then detail different strategies for incorporating environmental standards into a government agency's leasing process, and for prioritizing products and services to target. Finally, we'll provide a summary of the steps Alameda County intends to implement in our green leasing initiative.

Overview of Green Leasing

The demand and market for green buildings has been steadily growing. In 2013, 39.3% of commercial office space in the 30 U.S. cities with the largest commercial office space markets were Leadership in Energy and Environmental Design™ (LEED®) or Energy Star certified - up from 5.6% in 2005.² Green leasing is a newer and less recognized concept within the green building world, but most commercial space is leased,³ including 90% of California's office space.⁴ Green leasing involves incentivizing, looking for, or negotiating to develop more environmentally sustainable leased space.

While this paper focuses on issues other than energy, it is important to note that the most popular form of green lease appears to be that solely concerned with energy efficiency, and not other sustainability criteria. Such leases are also called energy aligned leases and high performance leases. Efforts focused on energy efficiency in leases include the Natural Resource Defense Council's <u>guidance on implementing such leases</u>. The Institute for Market Transformation and the U.S. Department of Energy (DOE) partnered to create the "Green Lease Leaders" program for tenants, brokers, and

¹ Alameda County Carbon Footprint: http://www.acgov.org/sustain/what/climate/footprint.htm

 $^{^2\,}National\,Green\,Building\,Adoption\,Index:\,\underline{http://www.cbre.com/o/international/AssetLibrary/Green-Building-Adoption-Index-2014\ Final.pdf}$

³ CoreNet: http://sustainability.corenetglobal.org/sustainabilitycommunity/sustainableleasing/

⁴ California Sustainability Alliance, Greening California's Leased Office Space: http://sustainca.org/sites/default/files/GreenLeases report 050509.pdf

landlords promoting energy efficiency in leases. The inaugural 2014 awardees included over 15 real estate companies and other organizations. New York City signed its first energy aligned lease in April 2011. However, other sustainability criteria are continuing to grow as a concern in leased spaces, and this paper will focus on those efforts that go beyond energy efficiency in leases.

Co-benefits of Green Leases

There are additional, non-environmental benefits that can be realized by tenants with a green lease. With Americans spending about 90% of their time indoors, ⁷ these benefits may include increased ability to recruit and retain employees, ⁸ higher employee morale, fewer sick days, and increased employee productivity. ⁹

The landlord may also accrue benefits from a green lease; there is a growing body of studies indicating increased property value and occupancy for green buildings. ¹⁰ One study, for example, found that occupancy rates are approximately 8% higher in LEED® offices and 3% higher in Energy Star offices, compared to offices without either certification. ¹¹

Green leases may also mean eligibility for property insurance discounts. For example, green retrofits could reduce the likelihood of losses from electrical fires and plumbing leaks. Tenants may also benefit insurance-wise from a reduced probability of workers' compensation and employee health claims.¹²

Factors Affecting Green Lease Negotiation Incentives

Tenant Leverage¹³

Among many other factors, a tenant's leverage may be affected by the proportion of the building that tenant leases, in terms of square feet, price, and number of other tenants. Multiple tenants can potentially have conflicting interests; for example, a retrofit desired by one tenant may disturb a neighboring tenant. The tenant who is leasing more space and/or paying a higher price may have more negotiating power. A longer lease also increases leverage, as this provides the landlord with a more reliable revenue stream, granted the tenant has good credit. A tenant has more negotiating power when a lease is being initially negotiated, and when renewal or amendment of a lease is occurs. Landlords face a tradeoff between concessions to a tenant's requests and the risk of vacancy, combined with the cost of acquiring a new tenant. The supply versus demand of real estate at any given time can significantly affect the weighing of this tradeoff.

The desirability of the tenant also weighs in on this tradeoff. In the case of Alameda County, some agencies have a clientele entering the building that may be perceived as a risk by the landlord and/or other tenants. On the other hand, public sector tenants are less likely to default on the payment of rent.

Cost and Service Structure

While a number of sources indicate lease type (gross, net, or hybrid) as an important factor in lease negotiations, any type of lease can be written such that incentives are aligned with both the landlord and tenant's goals; cost and service structure is the underlying issue. ¹⁴ Upfront capital costs that produce savings in utilities – primarily energy, but also water – can be financed so that the payer of the upfront costs also receives the benefit of the savings. Such initiatives

⁵ Green Lease Library (2014): <u>http://www.greenleaselibrary.com/green-lease-leaders.html</u>

⁶ New York City: http://www.nyc.gov/html/gbee/html/initiatives/clause.shtml

⁷ U.S. Environmental Protection Agency (1989). Report to Congress on indoor air quality: Volume 2. EPA/400/1-89/001C. Washington, DC.

⁸ Miller, N., D. Pogue, Q. Gough, and S. Davis. Green Buildings and Productivity. The Journal of Sustainable Real Estate, 2009.

⁹ Kats, G. The Costs and Benefits of Green. A Report to California's Sustainable Building Task Force. Capital E Analytics, October 2003.

¹⁰ Eichholtz, P., N. Kok, and J. Quigley. Doing Well By Doing Good? Green Office Buildings. Working Paper, Fisher Center for Real Estate and Urban Economics, UC Berkeley, April, 2008.

¹¹ Fuerst, F. and P. McAllister. Pricing Sustainability: An Empirical Investigation of the Value Impacts of Green Building Certification. Paper presented at the ARES Annual Meeting, April, 2008.

¹² California Sustainability Alliance, Greening California's Leased Office Space: http://sustainca.org/sites/default/files/GreenLeases report 050509.pdf

¹³ California Sustainability Alliance (2009): http://sustainca.org/green leases toolkit/tenant tools portfolio characterization

¹⁴ Rocky Mountain Institute (2008): http://www.rmi.org/Knowledge-Center/Library/2008-12 BreakthroughsMultiTenantDevelopments

can also be limited, for example, by whether the savings accrued equal or exceed the upfront capital cost. Tenant improvements can be implemented and paid for by the green tenant. Alternatively, the landlord can implement tenant improvements following the tenant's green specifications within an allowance, and any additional costs for green measures that go beyond normal costs could be passed through to the tenant. The pass-through of additional cost for green measures, if such costs exist, can be applied to any part of the space's operation and maintenance, such as janitorial services. The cost of additional time to incorporate green language into the leasing process may also optionally be incorporated into the lease.

Pre-existing green building certification

In some cases, it is the landlord who initiates the greening of a lease. This is sometimes motivated by a need for tenant cooperation in order to receive and/or maintain a green building certification. For example, the property management company Brandywine includes a clause for all of its Energy Star buildings that requires tenants to either submit monthly utility data or allow Brandywine to install sub-meters in their space. Other property management firms include lease language that requires tenant improvements to comply with LEED® for Commercial Interiors. Maintaining LEED® certification for Operations and Maintenance also requires the cooperation of tenants.

Incorporating Sustainability into the Leasing Process at Different Stages

Sustainability can be incorporated before, during, or after lease negotiations. Before lease negotiations, green leasing measures can be promoted by public policy. For instance, New York has a tax credit incentivizing green building practices in both leased and owned buildings. San Francisco has passed an ordinance that, beginning in 2012, requires all commercial buildings to have secure bicycle parking or permit tenants to bring their bicycles into the building. Other options include an ordinance that applies to government facilities, or to a broader audience. Governments can also develop a Green Leasing Policy Statement. Several policy templates exist, including one created by the California Sustainability Alliance.

Green leasing can also be incorporated into site/service provider selection. The Request for Proposals can incorporate sustainability criteria in the form of a scorecard, questionnaire, specifications, etc. The Environmental Protection Agency (EPA) drafted best practice green lease provisions that are based on the federal General Service Agency's (GSA) provisions for Solicitation for Offers. The EPA includes (but is not limited to) provisions regarding carpet, cleaning, flooring, insulation, landscaping, paint, pest management, transportation, waste management, energy efficiency, water efficiency, and green power. This is the only government example reviewed of explicit green lease site/service provider selection that incorporated sustainability criteria beyond energy efficiency.

Standard green lease language can additionally be implemented in the negotiation or renegotiation of a lease. Two government examples included in this review that go beyond energy efficiency are standards developed by <u>California</u> and <u>Pennsylvania's</u> GSAs. California's green lease language incorporates, but is not limited to, carpet, furniture, paint, and energy efficiency. Pennsylvania's language incorporates, but is not limited to, acoustical ceiling tile, carpet, insulation, landscaping, paint, energy efficiency, and water efficiency.

Incorporating Sustainability into the Leasing Process with Different Resources

Purchasing / Tenant Improvement

Purchasing guides and/or specifications can be developed separately from the leasing process. Many government entities have existing environmental purchasing policies, purchasing guides, and/or purchasing specifications that are not explicitly linked to leasing. As of 2012, at least 198 government entities in the United States have a sustainable

¹⁵ U.S. DOE (2012): http://apps1.eere.energy.gov/buildings/publications/pdfs/alliances/brandywine case study 10-15-12.pdf

¹⁶ U.S. Green Building Council (2009): http://www.usgbc.org/Docs/Archive/General/Docs691.pdf

¹⁷ San Francisco Department of the Environment: http://www.sfenvironment.org/article/tenant-bicycle-parking-in-existing-commercial-buildings/ordinance-overview

purchasing policy or plan in development or in place.¹⁸ These government entities can internally update their leasing process so that the department in charge of leasing consistently incorporates green purchasing into their process based on the existing resources.

Existing resources can also be adapted to more easily fit into the leasing process. For example, product specifications can be written in the Construction Specification Institute (CSI) format, which is the construction industry standard for describing product requirements. A landlord could thus directly give the CSI format product specification to whomever is contracted to provide and/or install the products of interest during a Tenant Improvement, without need for modification and with less risk of miscommunication. The EPA has product specifications that use this format¹⁹, and New York City references the CSI section each of its product specifications can be integrated into.²⁰ A tenant improvement manual can also potentially be provided for whomever is conducting tenant improvements, and can go into greater detail regarding proper installation of green products. Portland and Seattle have both developed green tenant improvement guides.

Operations & Maintenance

Proactive maintenance and repair guidelines can reduce excessive use of consumable materials, such as cleaning materials or water leaking from a pipe, and reduce the need to replace non-consumable materials, such as carpet. King County has developed a green operations & maintenance guide tailored specifically to its County buildings. These resources can also be useful to the general public. StopWaste, a public agency whose mission is to reduce waste in Alameda County, CA, has developed a more general green operations & maintenance guide with this purpose.

LEED®

As of May 2009, 206 local and 34 state government entities have incentives encouraging, or policies requiring, LEED® certification of buildings and/or remodels, frequently for government-owned buildings. Some of these policies include a preference for LEED® buildings when selecting new leased space for government operations; this is the case for the state of California. LEED® also has standards for operations and maintenance, and for commercial interiors (applicable to some remodeling projects). There are a number of resources for incorporating LEED® into green lease language, including a guide provided by the Leonardo Academy.

Decision Making Tools

A decision making tool that can factor in site-specific product and service needs may, in some scenarios, prove more effective than a less customized approach. For instance, the federal government has developed an online tool called SFtool that allows the user to select a building, room, and product type, and choose which factors (e.g., cost, recycled content) to compare different product options.

Prioritizing Efforts in Green Leasing

There are a number of possible framework s for determining which products or services to prioritize in green leasing efforts, including government regulations, environmental impact, enforceability, and market availability/cost. The current practices of government entities, including those reviewed for this paper as described above and detailed in Appendix 1 and 2, may be the best place to start, as this likely reflects a balancing of the aforementioned frameworks. Each framework is reviewed below separately.

Government Policies/Mandates

¹⁸National Institute of Governmental Purchasing Sustainable Public Procurement 2012 Survey Report: http://www.nigp.org/eweb/docs/research/SPPSurveyReport.pdf

¹⁹ EPA: http://www.wbdg.org/ccb/browse cat.php?c=250

²⁰ New York City: http://www.nyc.gov/html/mocs/downloads/pdf/epp/nycepp_construction.pdf

²¹USGBC LEED Public Policies: http://www.usgbc.org/Docs/Archive/General/Docs691.pdf

Government regulations can be the primary driving factor for which sustainability initiatives a public agency can or will focus on in a leased facility. Alameda County has a number of <u>sustainability policies</u>, including an Integrated Pest Management Resolution and Environmentally Preferable Purchasing Policy, and laws including the <u>Mandatory Recycling</u> Ordinance.

Environmental Impact of Products and Building Services

For building operations and maintenance, energy efficiency measures usually produce the greatest greenhouse gas emissions reductions, as a building with a life span of at least 40 years will likely have the majority of its life cycle energy consumption come from operational energy use.²² This is likely the reason energy efficiency has been the sole focus of many green leasing efforts. However, as buildings become more energy efficient, the greenhouse gas impact from other services (and from materials) will become a higher proportion of a building's overall greenhouse gas impact.²³

The greenhouse gas emissions resulting from the supply chain of a building's materials, also known as embodied carbon, come primarily from the building's structure, which is not typically upgraded during tenant improvements. The focus of most tenant improvements is interior products, which are often not included in building lifecycle impact studies; when they are, they typically account for only 2%–4% of the global warming impact of the building. However, if embodied carbon is a priority for an organization's green leasing initiative, there are databases that can be utilized comparing the embodied carbon of many interior building products per unit of mass, area, or volume, such as the <u>Inventory of Carbon and Energy</u>. There are also product attributes that typically indicate reduced embodied carbon, such as higher recycled content, and often to a lesser extent, local sourcing.

Interior building products can have a significant impact on indoor air quality, and indoor air quality is a source of many non-environmental benefits such as occupant health. A focus for indoor air quality concerns is usually reducing volatile organic compound (VOC) emissions from applicable products, such as carpet or paint. For general toxics reduction, certain chemicals can be limited or banned generally in interior building products. The <u>Living Building Challenge</u>, for example, has a list of chemicals that are prohibited in materials for their building certification program, such as phthalates and added formaldehyde. Other building services may have a significant impacts on the environment outside of the building footprint, such as landscaping (e.g., pollution) and waste and recycling collection (e.g., land use).

For all environmental impact considerations, it's also important to weigh potential benefits of increased tenant demand for certain interior products which can increase the overall market for a material. For example, if many tenants specify Forest Stewardship Council (FSC) certified wood for its cabinetry, the overall supply for FSC wood may increase as manufacturers try to meet the anticipated rise in demand.

Tenants can also influence consumable products used in ongoing maintenance services, such as healthier cleaning chemicals and recycled content paper towels for janitorial services. Again, tenant demand can have an influence on the larger market, and with increased availability, more service providers may begin to incorporate sustainability into their general practices.

Enforceability

Certain lease language can make enforceability of green lease terms easier in general, for example requiring applicable evidence of claims be provided to the landlord and/or tenant upon request and/or within a certain timeframe. For example, green lease criteria banning the use of certain chemicals for cleaning can be enforced by requiring submission

²² Thiel, Cassandra; Campion, N.; Landis, A.; Jones, A.; Schaefer, L.A.; Bilec, M.M. A Materials Life Cycle Assessment of a Net-Zero Energy Building. *Energies*. 2013, *6*, 1125-1141.

²³ Venkatarama Reddy, B.V.; Jagadish, K.S. Embodied energy of common and alternative building materials and technologies. *Energy Build*. 2003, 35, 129–137.

of an inventory of all cleaning chemicals used and their material safety data sheets. Utility bills are another example of proof via documentation.

Third-party audits and/or certification assures the validity of a manufacturer or service provider's environmental claims. The primary third party certifications that are considered market movers, and that each certify a number of materials, products and/or services of concern in green leasing, are Cradle to Cradle, Green Seal, GreenGuard, SCS Global Services, and Ecologo.²⁴

Market Availability/Cost

Environmentally sustainable products and services can be cost competitive, and in some cases cheaper, than standard options. Greater market availability of greener options will result in more competition among vendors, driving costs down; market availability can thus serve as a partial proxy for determining cost effective products and services to target in green leasing. Databases of green certified products and services are an indicator of market availability, and are especially useful as resources for products and services that have valid environmental claims. The availability of different product types for the aforementioned third party certifications (and, additionally, the Carpet and Rug Institute's Green Label Plus certification) is summarized in Table 3 and Table 4 below. This data was compiled from each certification body's online database in October of 2014.

Table 3. Number of Products Available Per Certification

Note: Compiled October 2014

Certification	Cleaning Chemical	Janitorial Paper Product	Adhesive/Coating/Sealant	Paint	Carpet	Floor Finish	Flooring	Gypsum/Plaster Board
Cradle to Cradle	22		3		23		12	
Green Seal	720+	290+	4	13				
GreenGuard	25		300+	150+		66	2390	90
SCS			65	50+	15+		2500+	
Ecologo	430+	200+	100	772		287		52
Carpet and Rug Institute					200+			

Table 4. Number of Companies with Certified Products

Note: Compiled October 2014

Certification	Cleaning Chemical	Janitorial Paper Product	Adhesive/Coating/Sealant	Paint	Carpet	Floor Finish	Flooring	Gypsum/Plaster Board
Cradle to Cradle	6		2		6		5	
Green Seal	100+	39	1	5				
GreenGuard	2		25+	9		4	45+	5
SCS			13	4	5		90+	

²⁴ Air Quality Sciences, Inc (2009): http://www.greenguard.org/Libraries/GG Documents/Reformat WP GreenProdCertProgCompare FINAL 1.sflb.ashx

Ecologo	55+	16	7	3		40+	1
Carpet and							
Rug Institute					110+		

Next Steps for Alameda County

Based on our research, we've produced environmental performance specifications in several formats to best meet stakeholder needs during different parts of the lease negotiation process. We've created a checklist for our Real Property department to easily reference during preliminary negotiations, as well as lease agreement and exhibit language to include in the leasing contract that ensures compliance with negotiated environmental standards. These specifications address finishes and flooring for tenant improvement construction (e.g. paints, carpet), janitorial services, landscaping, and waste and recycling collection services. Please visit our website at acgov.org/sustain/what/greenbuilding/ to access these documents.

Product Specifications Reviewed for Relevance to Green Leasing

Note: This is not a comprehensive list of existing practices.

Sustainability Issue	O&M Guide	Lease RFP/Provisions	Lease Lang/Specs	Tenant Improvement Guide	Purchasing (Note: only entities that aren't already mentioned in another category are listed here)
					King County, New York
			Pennsylvania,	Portland,	City, Minnesota,
Carpet		EPA	California	Seattle	Massachusetts
Ceiling tiles			Pennsylvania	Portland	
Furniture			California	Portland, Seattle	
Green Cleaning Materials	King County, StopWaste	ЕРА		Portland	Seattle, Santa Monica, New York City, Minnesota, Massachusetts, San Francisco
Insulation		EPA	Pennsylvania		New York City, Minnesota, Los Angeles County
Non-Carpet Flooring Materials	StopWaste	EPA	Pennsylvania	Portland, Seattle	New York City, Minnesota, Los Angeles County
Paints, sealants, coatings	StopWaste	EPA	Pennsylvania, California	Portland, Seattle	King County, New York City, Minnesota, Massachusetts
Wood		EPA		Portland	San Francisco

Service/Utility Specifications Reviewed for Relevance to Green Leasing Note: This is not a comprehensive list of existing practices.

Sustainability Issue	O&M Guide	Lease RFP/Provisions	Lease Lang/Specs	Tenant Improvement Guide	Purchasing (Note: only entities that aren't already mentioned in another category are listed here)
			Pennsylvania,		San Francisco, Santa
	King		New York		Monica,
	County,		City,	Portland,	Massachusetts,
Energy Efficiency	StopWaste	EPA	California	Seattle	Minnesota
Green Cleaning Service	King County, StopWaste	EPA		Portland	Los Angeles County, Massachusetts, Seattle
Green Power		EPA		Portland	Santa Monica
Pest Management		EPA		Portland	King County, San Francisco, Santa Monica
Transportation		EPA		Seattle	San Francisco
Waste and Recycling	King			Portland,	
Collection	County	EPA		Seattle	San Francisco
Water Conservation	King County, StopWaste	EPA	Pennsylvania	Portland, Seattle	Santa Monica

Links to Reviewed Service/Utility Specifications

Note: This is not an exhaustive list of resources.

	Operations &	,		Tenant
	Maintenance			Improvement
Organization	Guide	Lease RFP/Provisions	Lease Lang/Specs	Guide
Organization	Guide	Lease KFF/FIOVISIONS	Lease Lang/Specs	Guide
			http://www.documents.dgs.	
			ca.gov/RESD/RELPS/leasereq	
California			uirements/ExhibitB.pdf	
		Best Practice Lease		
		provisions:		
		http://www.epa.gov/oai		
		ntrnt/projects/leasepro		
EPA		<u>visions.htm</u>		
	http://your.ki			
	ngcounty.gov			
	/solidwaste/g			
	reenbuilding/			
	documents/o			
	-m-			
Vina County	guidelines-			
King County	<u>2011.pdf</u>			
			Energy Aligned Clause:	
			http://www.nyc.gov/html/gb	
New York			ee/html/initiatives/clause.sh	
City			<u>tml</u>	
			http://sustainca.org/sites/de	
Pennsylvania			fault/files/dgsspecs.pdf	
				http://www.portla
			Included in Tenant	ndoregon.gov/bps
Portland			Improvement Guide	/article/285215
				http://www.seattl
				e.gov/environmen
				t/buildings-and-
				energy/green-
				tenant-
				improvement-
Seattle				guides
	http://www.s			
	topwaste.org			
	/docs/green			
	maintguide.p			
StopWaste	<u>df</u>		_	

Links to Reviewed Product Specifications

Note: This is not an exhaustive list of resources.

California

http://www.dgs.ca.gov/buyinggreen/Home.aspx

EPA

http://www.epa.gov/epp/index.htm

King County

http://www.kingcounty.gov/operations/procurement/Services/Environmental_Purchasing/Products.aspx

Los Angeles County

http://green.lacounty.gov/

Massacusetts

http://www.mass.gov/anf/budget-taxes-and-procurement/procurement-info-and-res/procurement-prog-and-serv/epp-procurement-prog/green-products-and-serv/specific-epp-statewide-contracts/

Minnesota

http://www.pca.state.mn.us/index.php/topics/preventing-waste-and-pollution/environmentally-preferable-purchasing/state-contracts.html

New York City

http://www.nyc.gov/html/mocs/downloads/pdf/epp/nycepp_construction.pdf

Pennsylvania

http://www.dgs.pa.gov/Businesses/Materials%20and%20Services%20Procurement/Procurement-Resources/Pages/Green-Procurement.aspx#.VScFctzF9ps

Portland

http://www.portlandoregon.gov/bibs/37732?

San Francisco

http://sfapproved.org/guide-city-staff

Santa Monica

http://www.smgov.net/Departments/OSE/categories/content.aspx?id=4157

Seattle

http://www.seattle.gov/city-purchasing-and-contracting/city-purchasing/green-purchasing

StopWaste

http://www.stopwaste.org/preventing-waste/fact-sheets-guides-and-model-policy