

Brisbane Building
Efficiency Program

Brisbane Building Efficiency Program

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Brisbane's Setting

RICAPS
Regional Integrated Climate Action Planning System

City of Brisbane
Climate Action Plan



Adopted September 17, 2015
Prepared in collaboration with City/County Association of Governments of San Mateo County

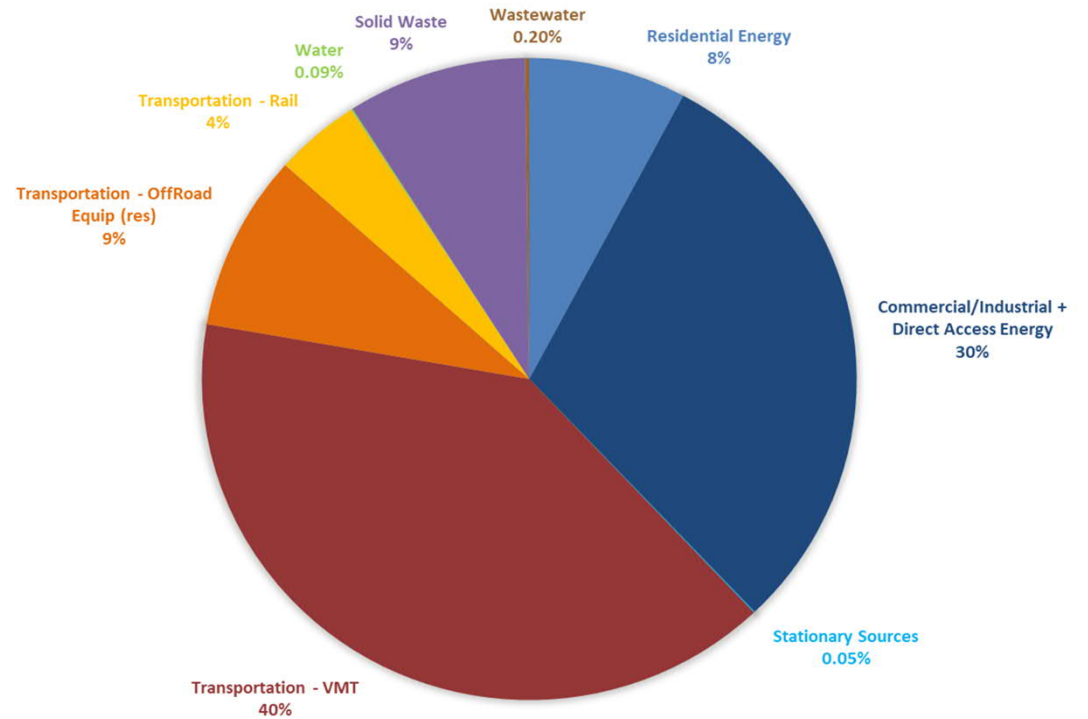


BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT



the **Energy**
Coalition

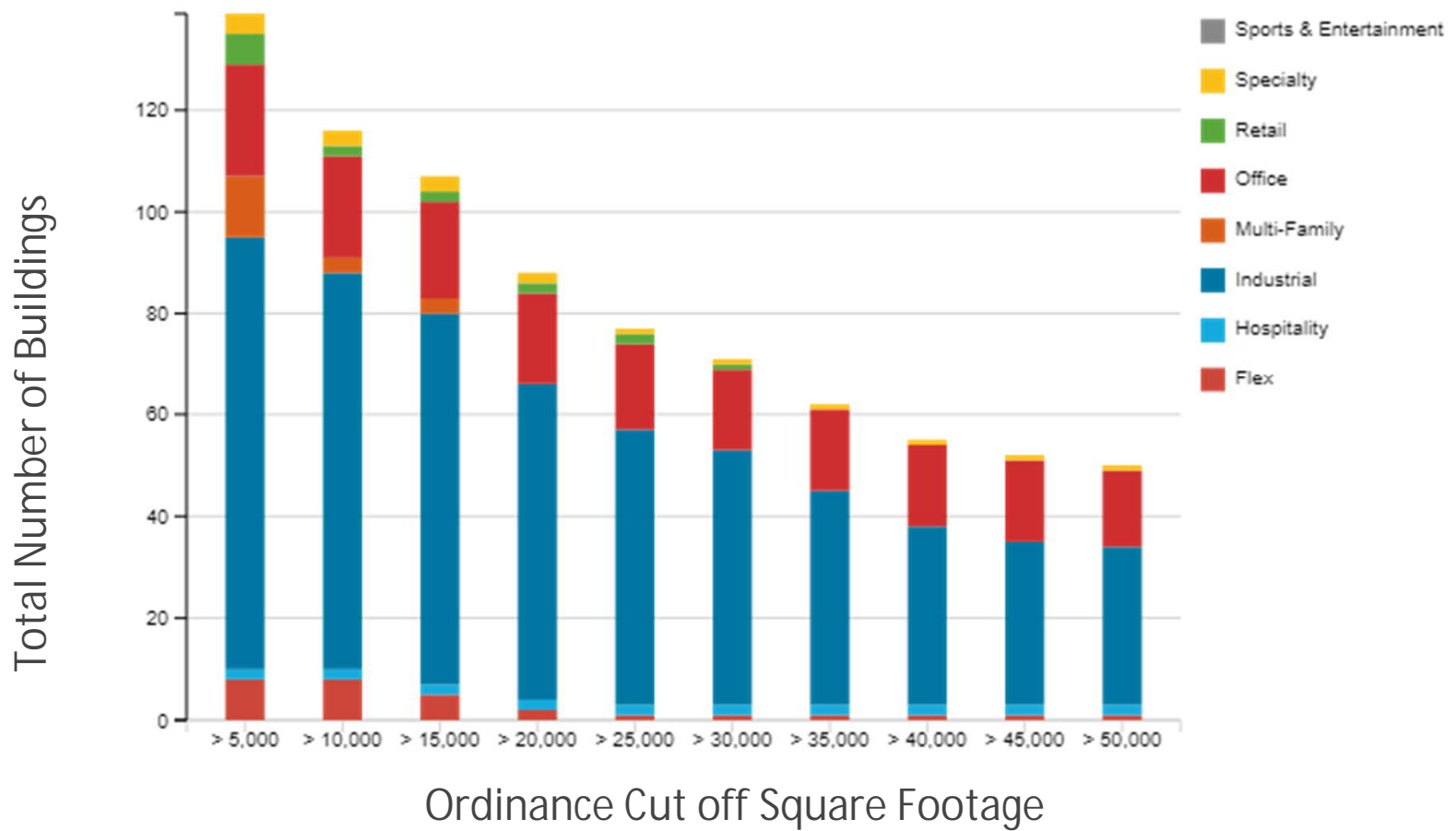
Brisbane 2015 Community GHG Inventory



Program Goals

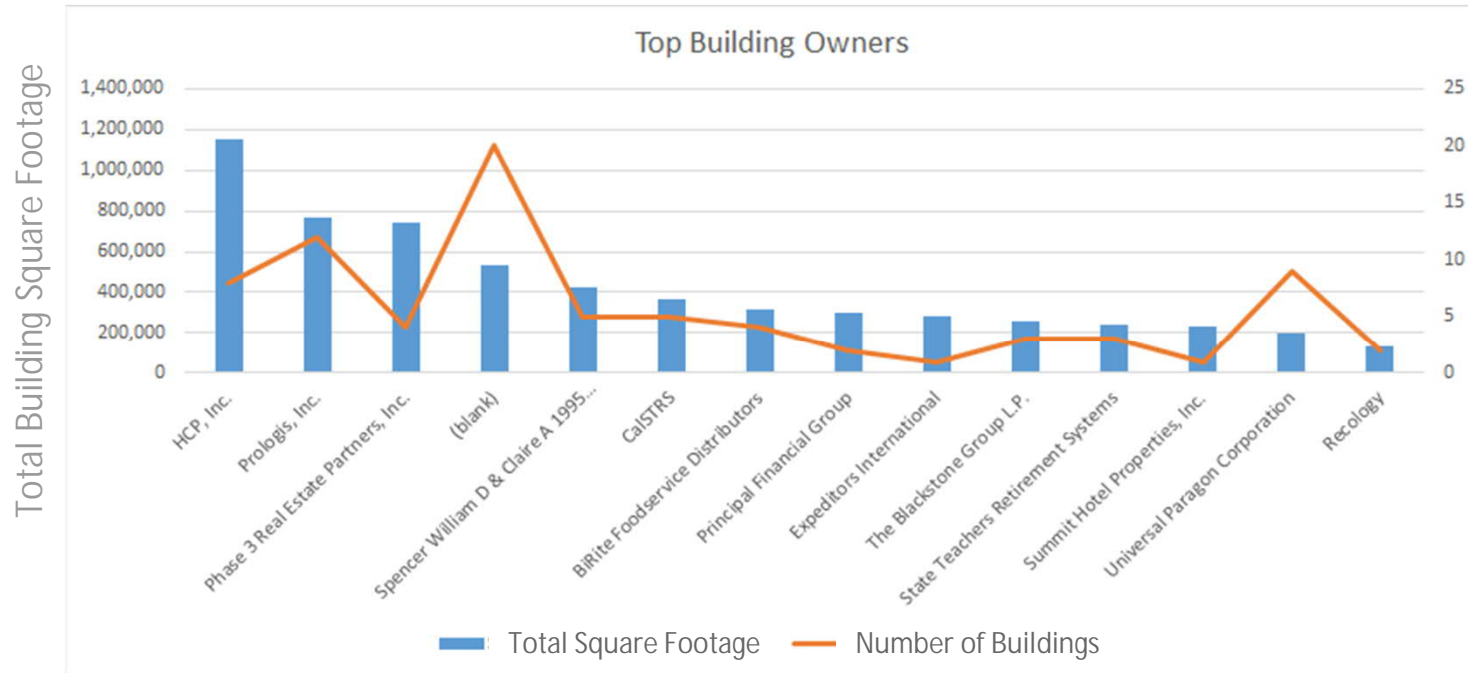
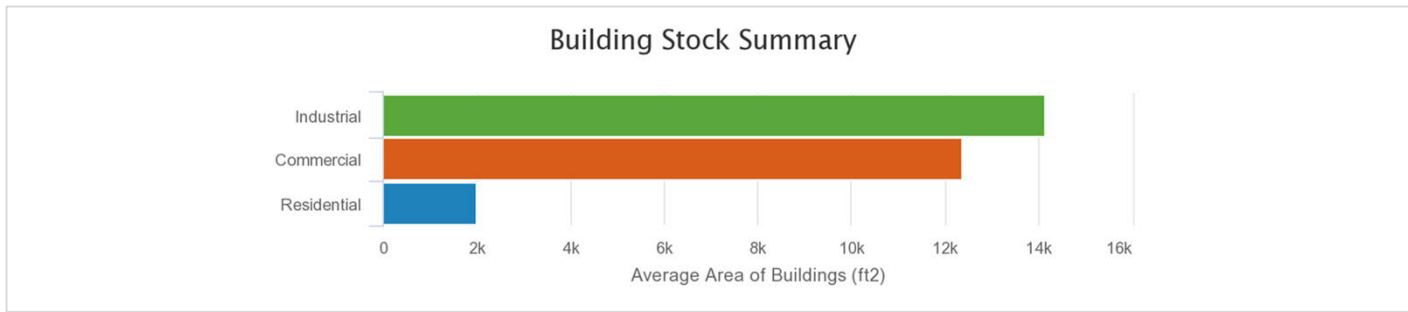
- ★ Reduce environmental impact of local built environment
↓GHG emissions, energy & water use to meet climate goals
- ★ Increase comfort, safety and health for building occupants
- ★ Improve a building's resilience and value
- ★ Inform decision makers about energy and water performance and improvement opportunities
- ★ Support clean energy and decarbonization
- ★ Data transparency and market transformation
- ★ Green job creation





What type of buildings are in Brisbane?

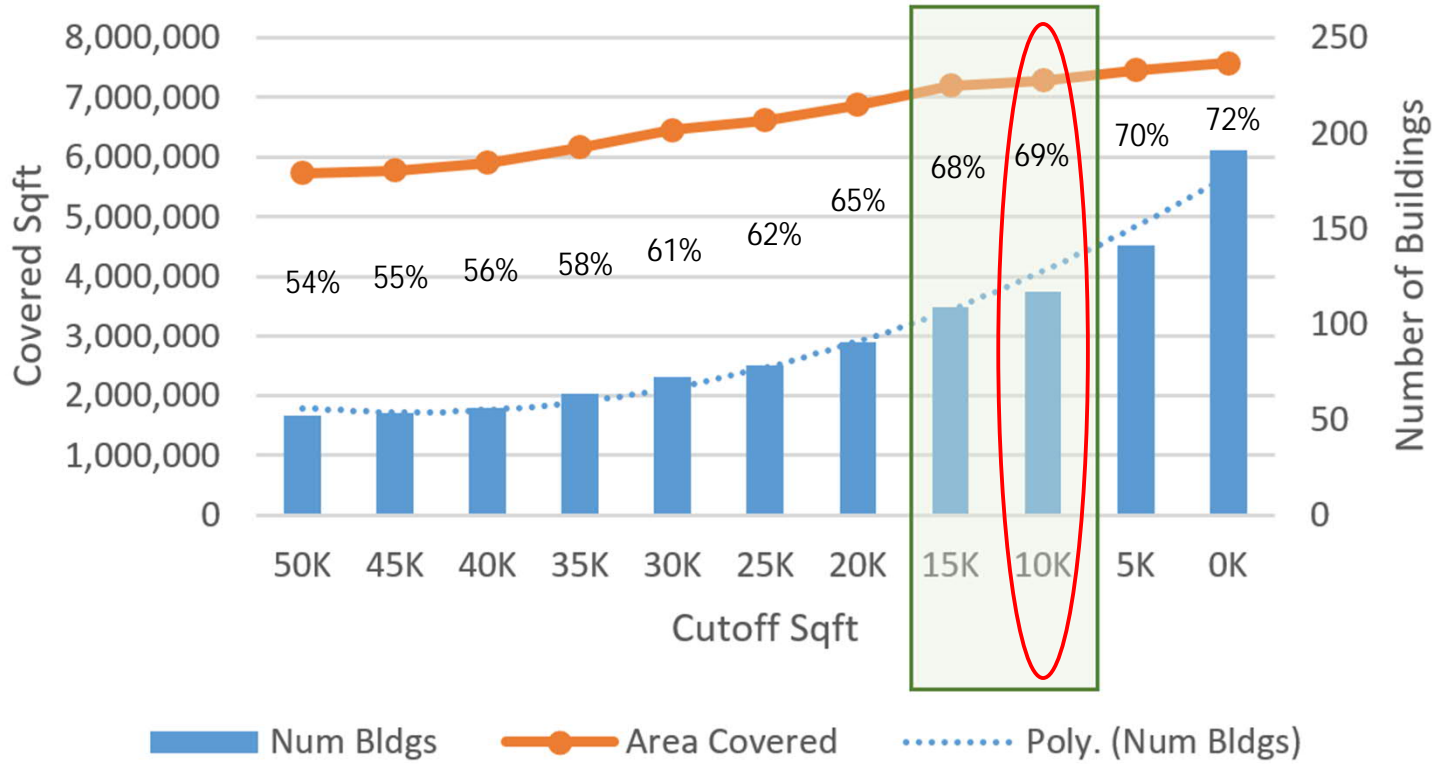




Average Building Size & Top Owners



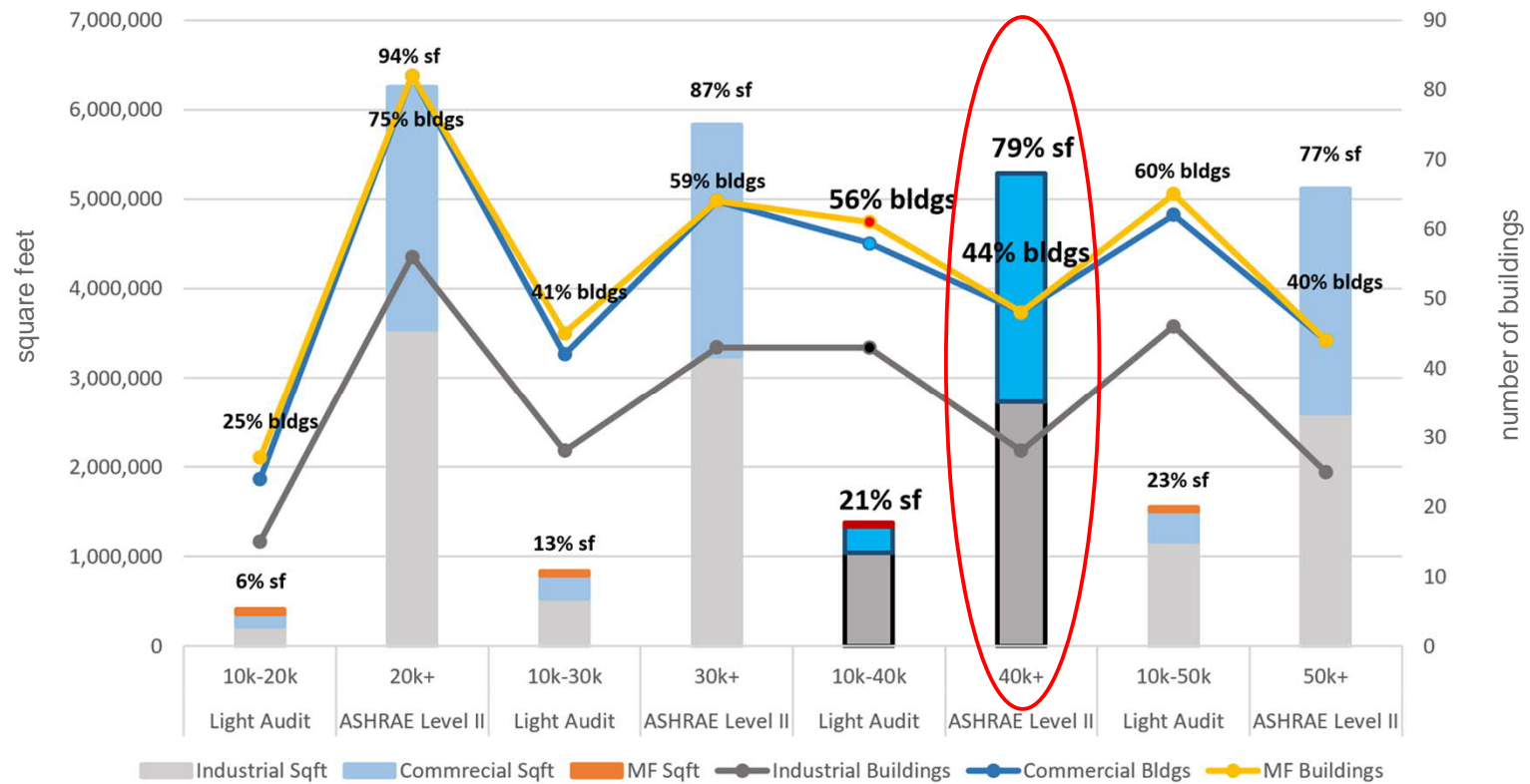
Number of Buildings vs Covered Sqft



Benchmarking Requirement Cutoff



Beyond Benchmarking Cutoff Scenarios



Audit Requirement Cutoff



Innovating to address concerns

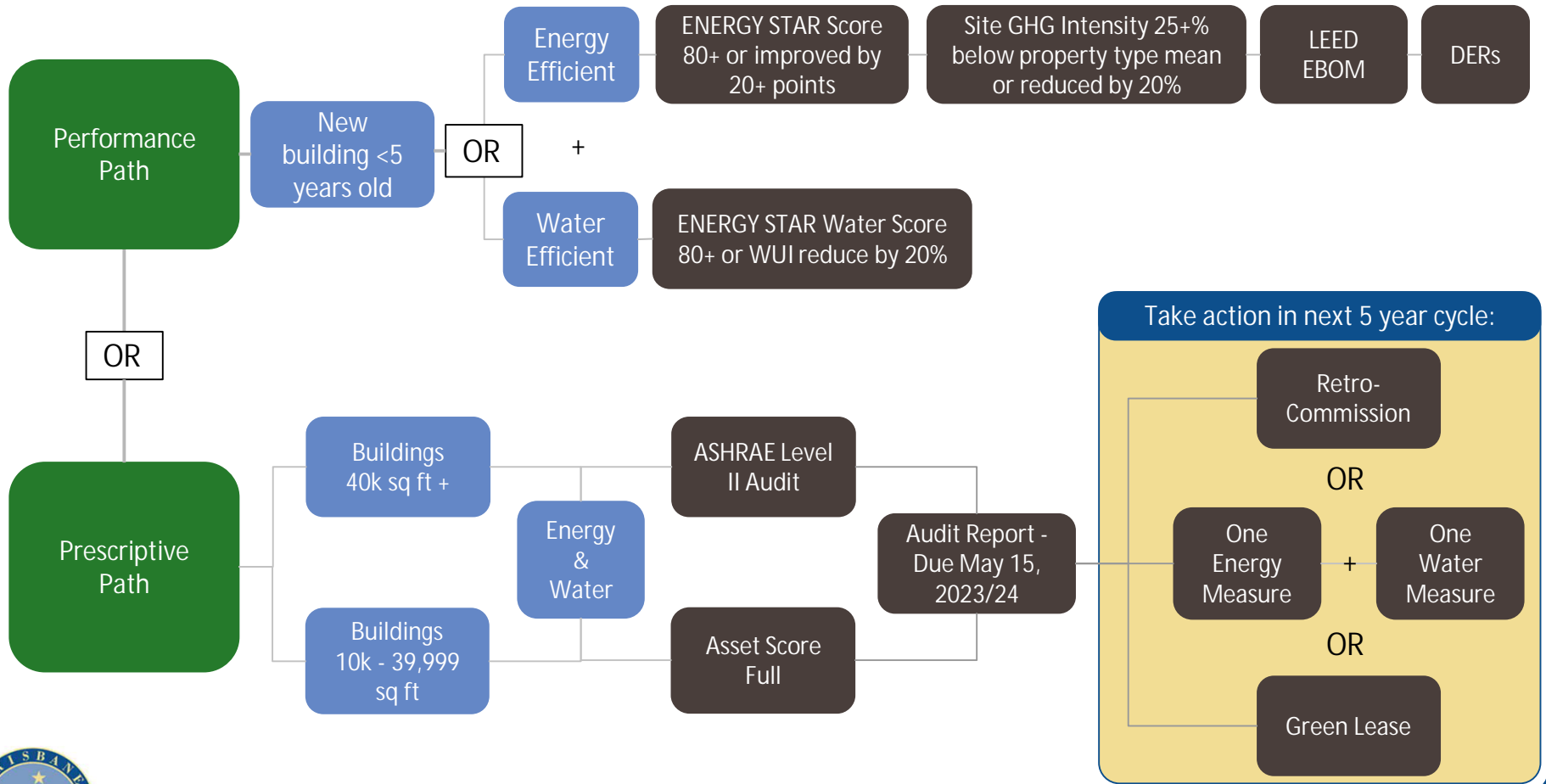
- ★ Industrial buildings included
- ★ Extends requirements to tenants in some cases
 - Eases concerns of owners with rental agreements that provide control to lessees
 - Provides both tenants and owners recourse through exemptions, extensions, hardships and appeals
 - Washington D.C. example
- ★ Green Lease compliance option
- ★ Report on current or planned distributed energy resources



Compliance Pathways

Annual Benchmarking beginning 2021 - 10,000 sq ft or more

Beyond Benchmarking - every 5 years beginning: 2023 for commercial, 2024 industrial + residential



Average Audit Savings and Costs

★ Asset Score

- PNNL [technical report](#) states data collection takes 6 - 20 hours
- ~ \$600 - \$2,000 at \$100/hr
- Asset Score [reference](#) report

★ Savings

- Utility costs in U.S. office buildings average \$2.20/sq. ft.
- 20% reduction in energy use = savings of \$0.44/sq. ft. (DOE EERE 2011c)

Building Size	ASHRAE Level 2 Audit Cost Estimate	RCx Report Cost Estimate*
40,000 sq. ft.	\$6,000	\$12,000
100,000 sq. ft.	\$15,000	\$30,000
*RCx typically has low cost measures		

	\$ / Sq. Ft.
Audit Cost	\$0.10 - 0.15
RCx Cost	\$0.20 - 0.30
Total Cost	\$0.30 - 0.45
Estimated Utility Savings	\$0.44
Costs recouped in ~1 year; savings continue	



Expected Impacts

- ★ How many buildings are affected?
 - Benchmarking: 109 / 6.6M sqft
 - ASHRAE Level 2 Audits: 48 / 5.3M sqft
 - Asset Score - Full: 61 / 1.3M sqft

- ★ What are the expected GHG Impacts?
 - ~2700 MTCO₂e reduction within 5 years of ordinance effective date



Where are we now?



BAAQMD Grant Phase 2: Implementation

- ★ Benchmarked city buildings
- ★ Developing administrative systems (database, forms, outreach materials) w/ TEC & Maalka
- ★ Develop web portal with details on ordinance, how to comply + resources:
 - Auditing & retro-commissioning
 - Existing rebates & incentives
 - Available financing
 - Distributed energy resources
 - Energy sources (fuel-switching, PCE ECO-100)
 - Green Leases
 - ROI & other benefits of improvements
 - Case studies & testimonials
- ★ Outreach, education and training
 - Webinars, workshops & on-demand web trainings
 - Small business compliance support
- ★ Voluntary compliance pilot
- ★ Determine ongoing (post-grant) resource needs
- ★ Toolkit for other jurisdictions to replicate the program

Questions?

B-BEP!



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www.brisbaneca.org/economic-development/page/building-efficiency-program

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