

C40CITIES
Climate Leadership Group

MEGA-CITY ACTION AND BEST PRACTICES IN ENERGY EFFICIENCY



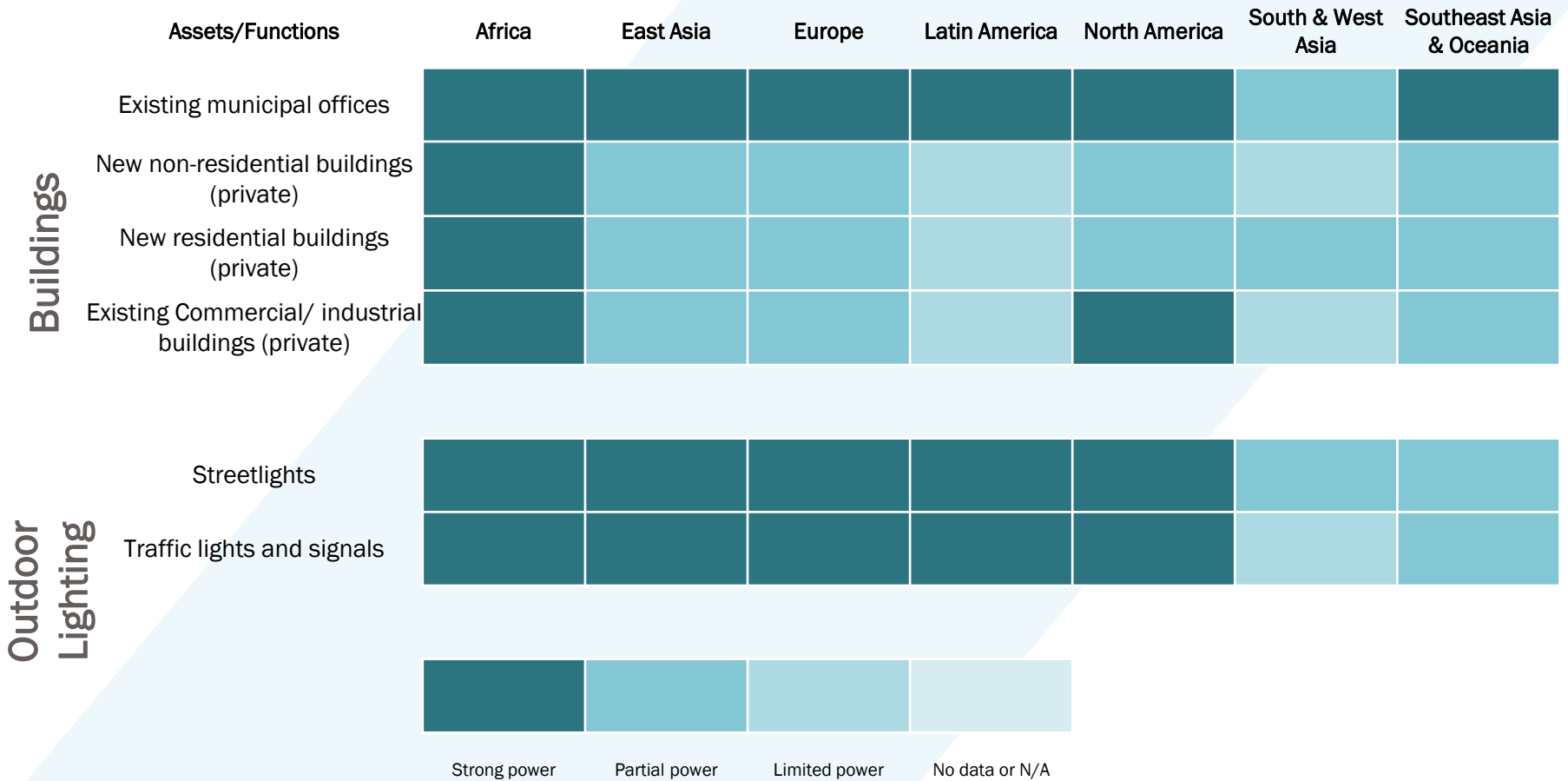
The C40 Cities



98% of Cities Face Climate Risks - Now



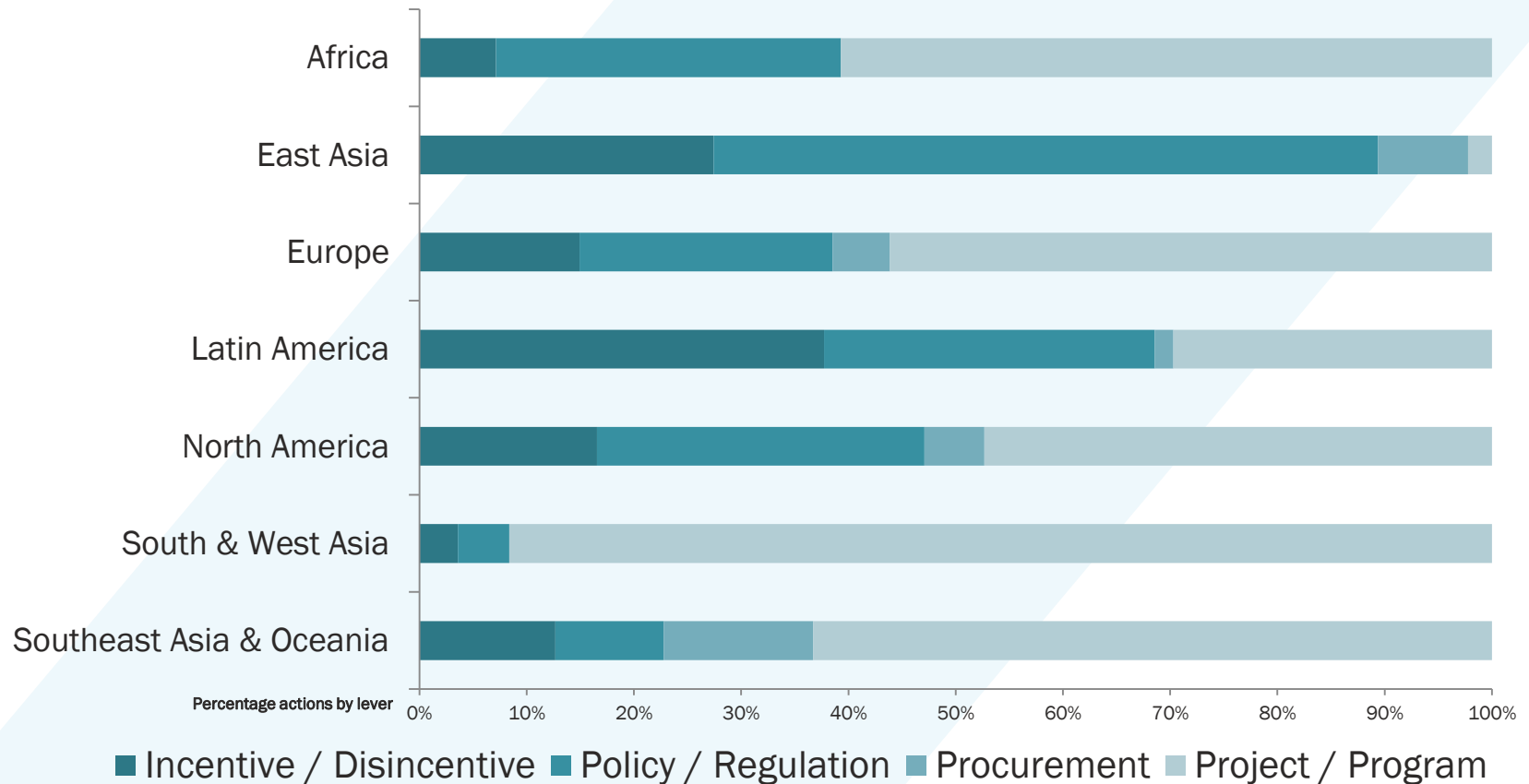
Cities have the Power to Take Action



C40 Transfers Ideas that Work

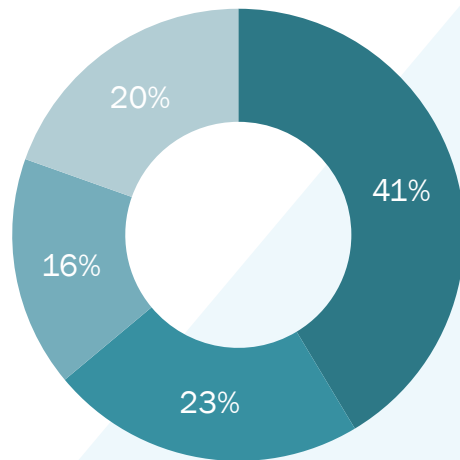


Cities Tailor Solutions to Local Circumstance



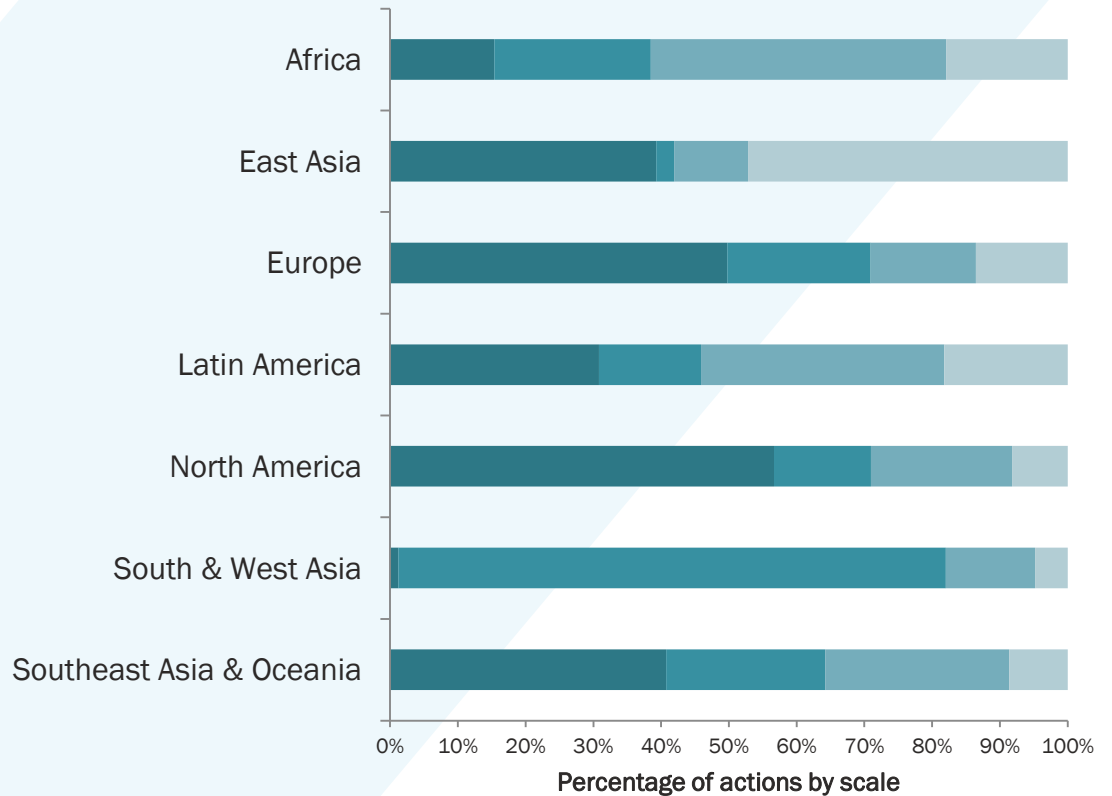
Cities are Taking Buildings Actions to Scale

C40 Global



- Transformative (city wide)
- Significant (across most of the city)
- Proposed (awaiting final authorization)
- Pilot (being tested)

Regional Breakdown



- Transformative (city wide)
- Significant (across most of the city)
- Pilot (being tested)
- Proposed (awaiting final authorization)

London's RE:FIT

Details:

- Open to all public sector organisations in London
- Pre-approved panel of ESCOs
- Guaranteed savings contracts
- Includes a EU-funded “programme delivery unit”

Results:

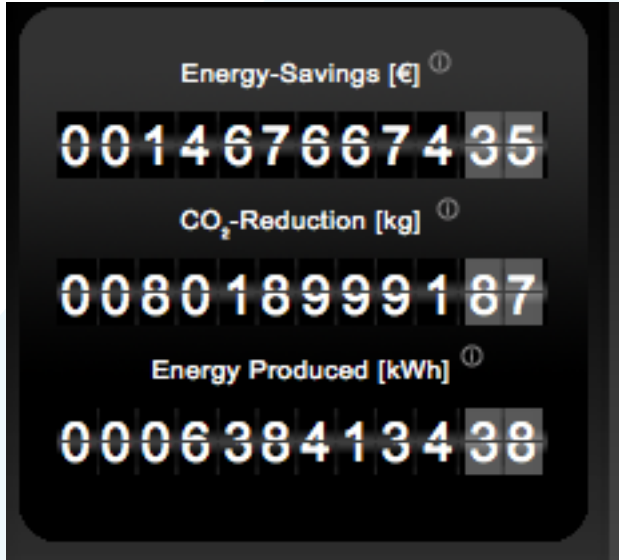
- 235 buildings retrofitted
- £31.7m invested
- 24,000 t CO₂e annually saved
- £3.5 million annual fuel bill savings

In 2007, President Clinton challenged C40 cities to commit to retrofitting public sector buildings. London led - and developed RE:FIT.

RE:FIT
BUILDING ENERGY EFFICIENCY FOR TOMORROW



Berlin Energy Agency



- “Energy Savings Partnership”
- Program of the Berlin Energy Agency available to public and private buildings
- Pools buildings (average 20) to a minimum energy bill of €200,000 to ensure scale
- 1,400 buildings
- 64,000 t CO₂e annually saved
- Average energy savings of 26% per building pool

NYC: Greener, Greater Buildings

- 75% of Citywide GHGs
- “Greener, Greater Buildings Plan”
- 4 local laws:
 - Mandatory benchmarking (>50,000 sq ft)
 - Energy code compliance
 - Mandatory auditing and retro-commissioning every 10 years
 - Mandatory lighting upgrade and sub-metering
- Mayor’s Carbon Challenge – 30% GHG reduction over 10 years
 - 17 universities, 11 hospitals
 - Expanding to commercial offices, multi-family residences, theatres





Tokyo: Cap and Trade



- Not aiming to restrain urban business activities and development; instead promote the shift toward greener, low carbon buildings
 - Target 1,300 Buildings
- Two compliance periods 1) 2010-2014: 6% reduction 2) 2015-2019 : 17%
 - Targeted facilities submit annual report
 - More than 60% of targeted facilities have successfully reduced more than target
 - More than 20% of targeted facilities have already succeeded in meeting 17% reduction target
 - Mandatory reporting, including for SMEs, preceded introduction of cap and trade programme



Melbourne: 1200 Buildings



- Innovative financing effort for commercial building retrofits – supported from its inception by expertise across C40's network of staff, cities and partners.
- 70% of commercial building stock; improve EE by 38% and reduce GHG emissions by 383,000 tonnes annually
- Environmental upgrade finance gives commercial building owners better access to competitively priced capital; paves way for owners to share the cost of retrofits with tenants
- Financiers have a strong incentive to advance funds for retrofit works as they can recover funds as a statutory charge which provides certainty.

Climate Positive Development Framework

ON-SITE

Maximize efficiency.



ENERGY



WASTE



TRANSPORTATION

OFF-SITE

Earn credits by reducing emissions
in the surrounding community.



Verified Projects will reduce ~1m t CO₂e



**Mahindra World City
Jaipur**

**Parque de Cidade,
Sao Paulo**



Projects listed are currently in the programme; 5 proposals have been currently vetted by a technical review committee

Beijing is Learning from Global Projects



发展绿色建筑 让群众生活更舒适

——北京市绿色建筑半年“新增”四倍的背后

北京市规划委员会

2013年6月到12月,北京市共有247个项目按照市规委测设管办发布的《北京市绿色建筑一星级施工图审要点》通过了绿色建筑施工图审查,在设计阶段达到绿色建筑一星级要求,新增绿色建筑面积约1200万平方米。2012年全年,通过审查的绿色建筑面积为255万平方米,半年时间北京“新增”绿色建筑面积增长了四倍。

发展绿色建筑,是建设生态城市的重要一环。北京这样一个特大型城市,能不能从规划层面统筹解决城市发展的可持续问题,值得大家共同思考。

绿色示范区树立行业典范

绿色建筑、绿色生态示范区、绿色居住区、绿色生态村镇、绿色基础设施、绿色化改造……这些概念让公众感性理解需要实实在在地摆在公众面前。

2013年5月,北京市发布实施了《北京市发展绿色建筑推动生态城市建设实施方案》,要求自2013年6月1日起,新建项目执行绿色建筑标准。截至当年12月底,北京市有247个项目通过了审查,在设计阶段达到绿色建筑一星级要求,新增绿色建筑面积约1200万平方米,而2008—2012年新增绿色建筑总面积仅为419万平方米。

校园不仅仅是学生受教育的场所,同时应具备强烈的教育功能。孩子们在校园中感受着、成长着,教师在校园中体验着工作的快乐和幸福。北京第一师范学校附属小学新建工程对绿色建筑的追求体现在校园设计的方方面面。利用自然通风来达到降低空调能耗,提高人体舒适度,改善室内空气品质的效果,合理调整园区内建筑布局,使得建筑物前后存在明显压差,推动自然通风的进行。校园里还有很多随处可见的绿色建筑概念,比如下凹式绿地,



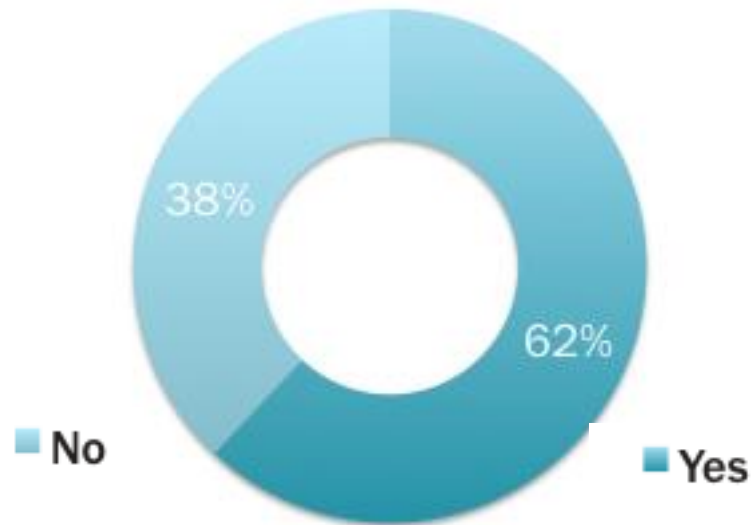
相关链接

C40可持续社区组及“正气候开发计划”

C40 全称是C40 城市气候领袖,是由城市创建并为城市自身服务的城市组织。C40包括能源、融资与经济发展、量与规划、固体废物管理、可持续社区、以及水环境等多个板块的工作组。“正气候开发”是指既能减少开发项目本身所生的排放,又能通过消除其周边社区的排放,来抵消项目本身无法减少的剩余排放,从而在项目完成时实现净零或负排的目标。

为了避免不必要的复杂性,“正气候开发”主要关注开发完成后的运营排放,并且只针对能源(供热和用电)、废物(固废和污水)以及交通运输三个主要运行排放源进行计算。根据项目建成后零或负排放目标,针对主要运行排放源政府和参与者制定一揽子解决方案和计划,并按照一定的测算标准和计算方法进行测算和验证的建设方法称之为“气候开发计划”。它的目标是创建一种能实现温室气体排放低于零且具经济的大规模城市发展模式。

Finance is Still a Hurdle



Has the city established a fund to invest in energy efficiency, renewable energy or carbon reduction projects?


MegaCities can help Bridge the Gap



C40 CITIES

CLIMATE LEADERSHIP GROUP

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