

# C40CITIES

CLIMATE LEADERSHIP GROUP



# MegaCidades e a Mudança Climática





# C40 Cities Climate Leadership Group



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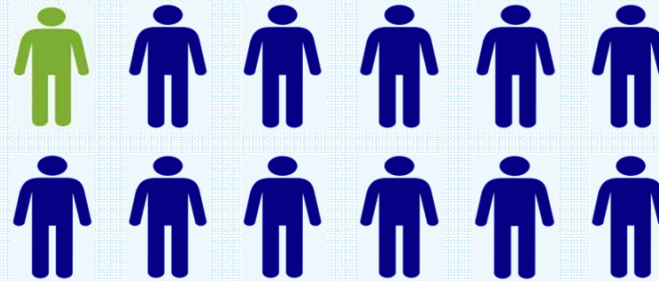
# A Rede de Cidades C40



# A importância da C40

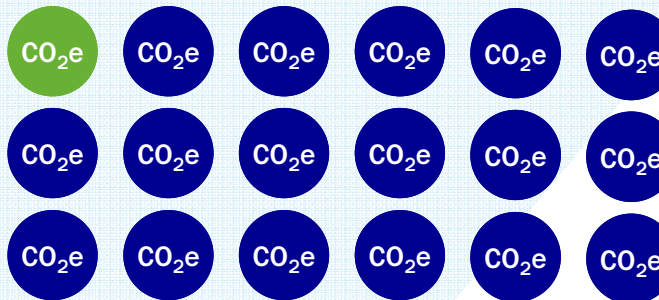
8%

of all humans



5%

of global GHG emissions



21%

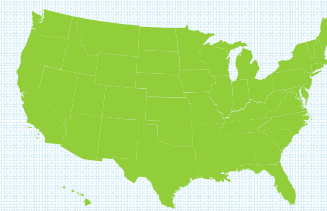
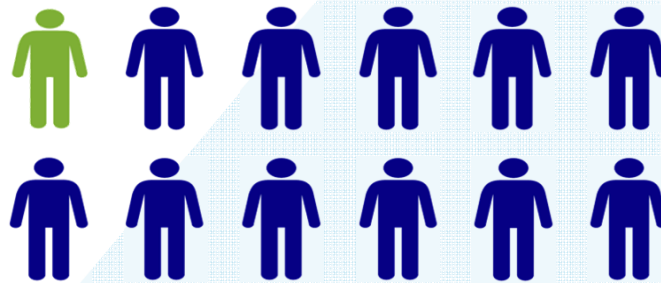
of global GDP



# A importância da C40

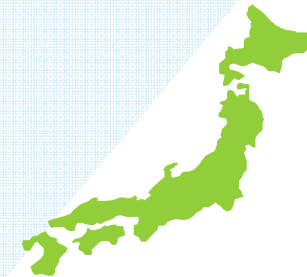
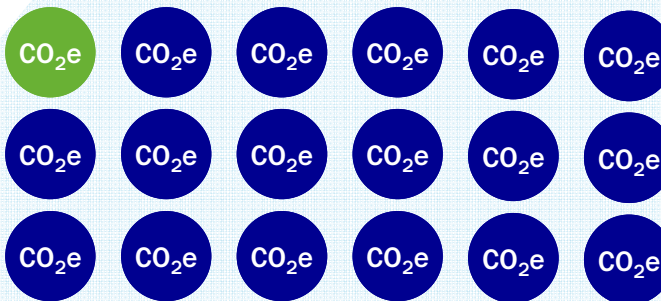
8%

da população



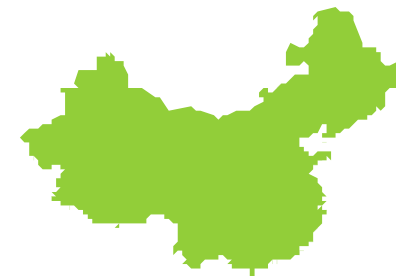
5%

da emissão  
global GEE



21%

do PIB global



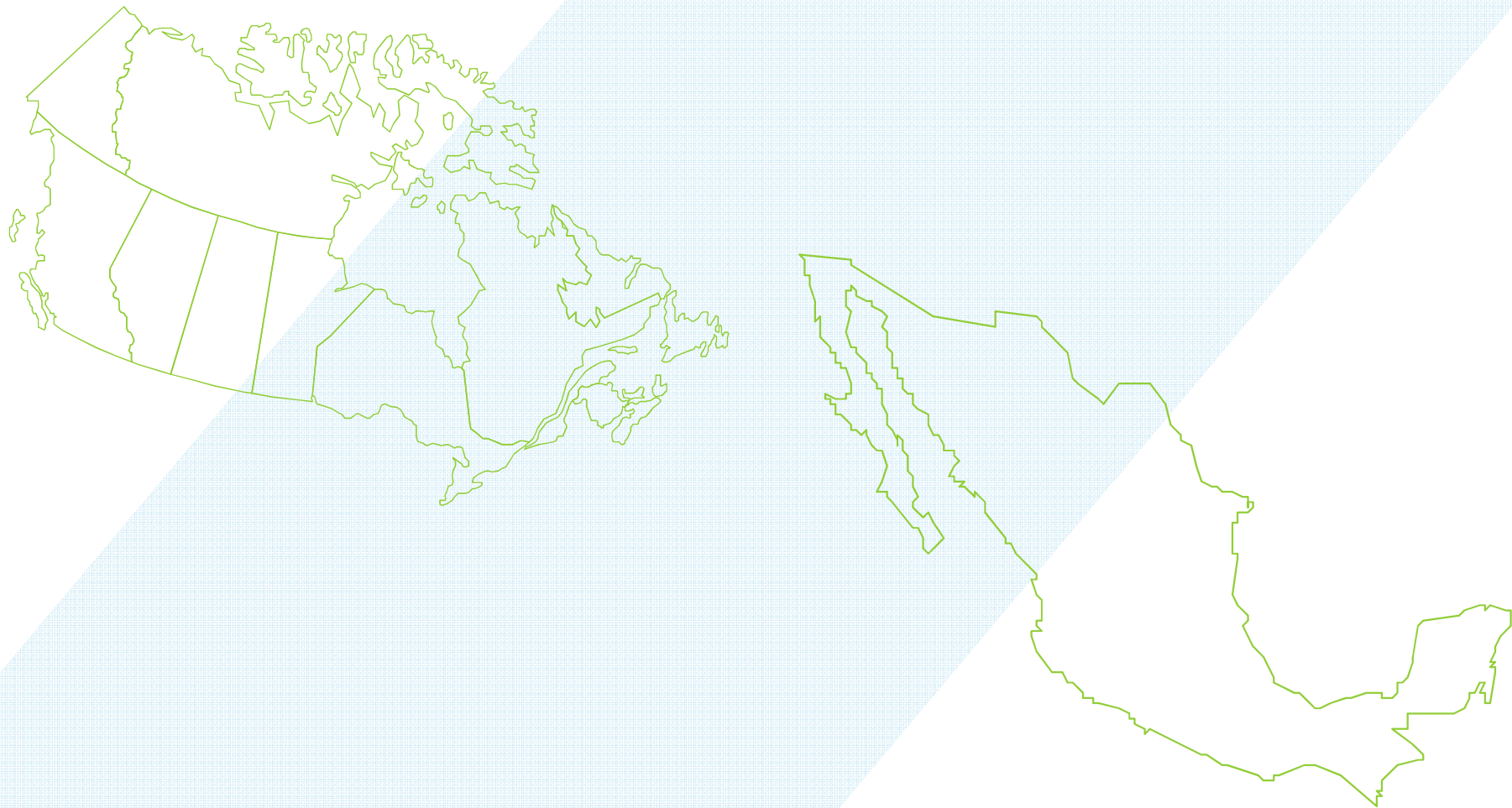
# A importância da C40

1 BILHÃO DE TONS DE REDUÇÃO POTENCIAL



# A importância da C40

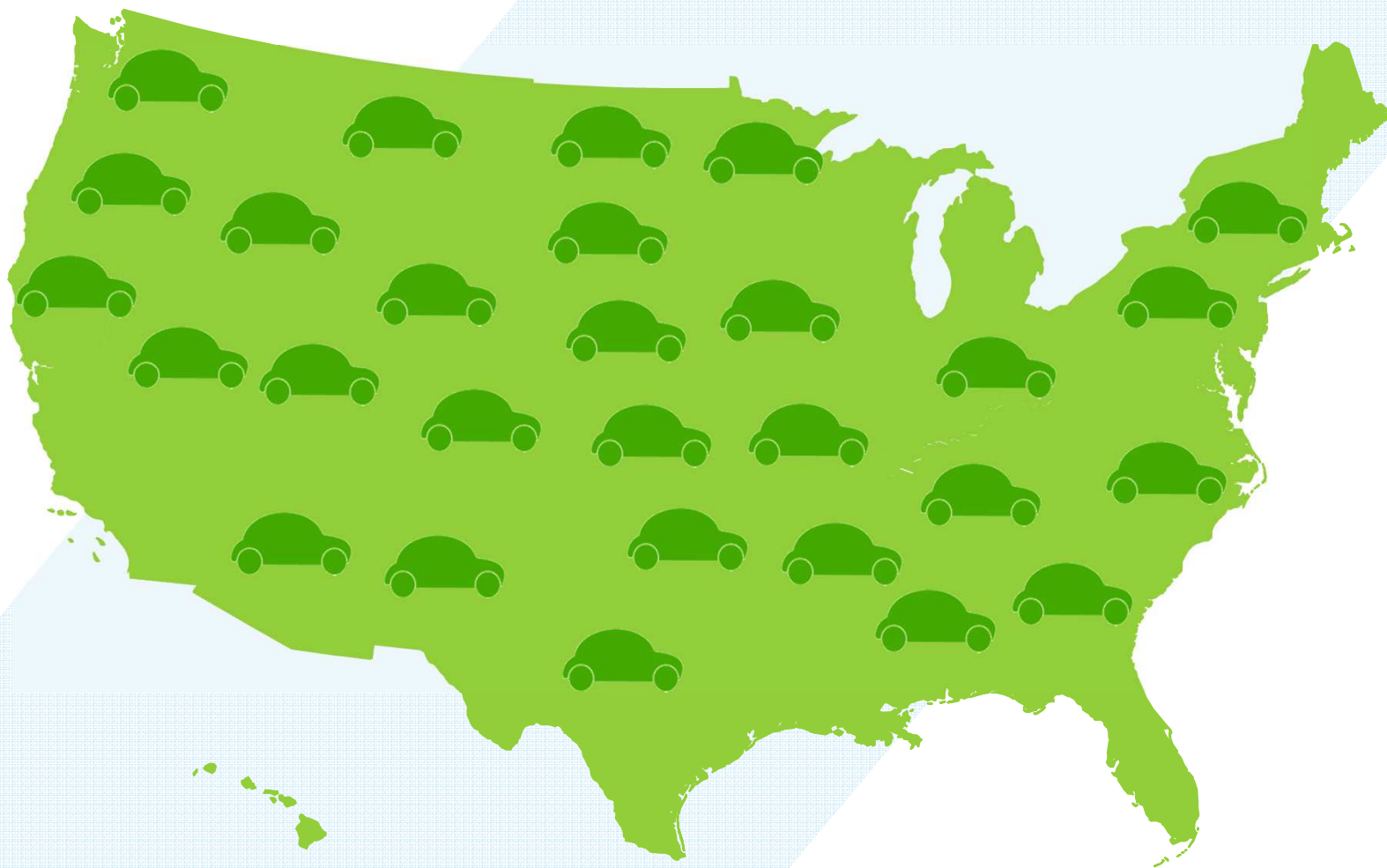
1 BILHÃO DE TONS DE REDUÇÃO POTENCIAL





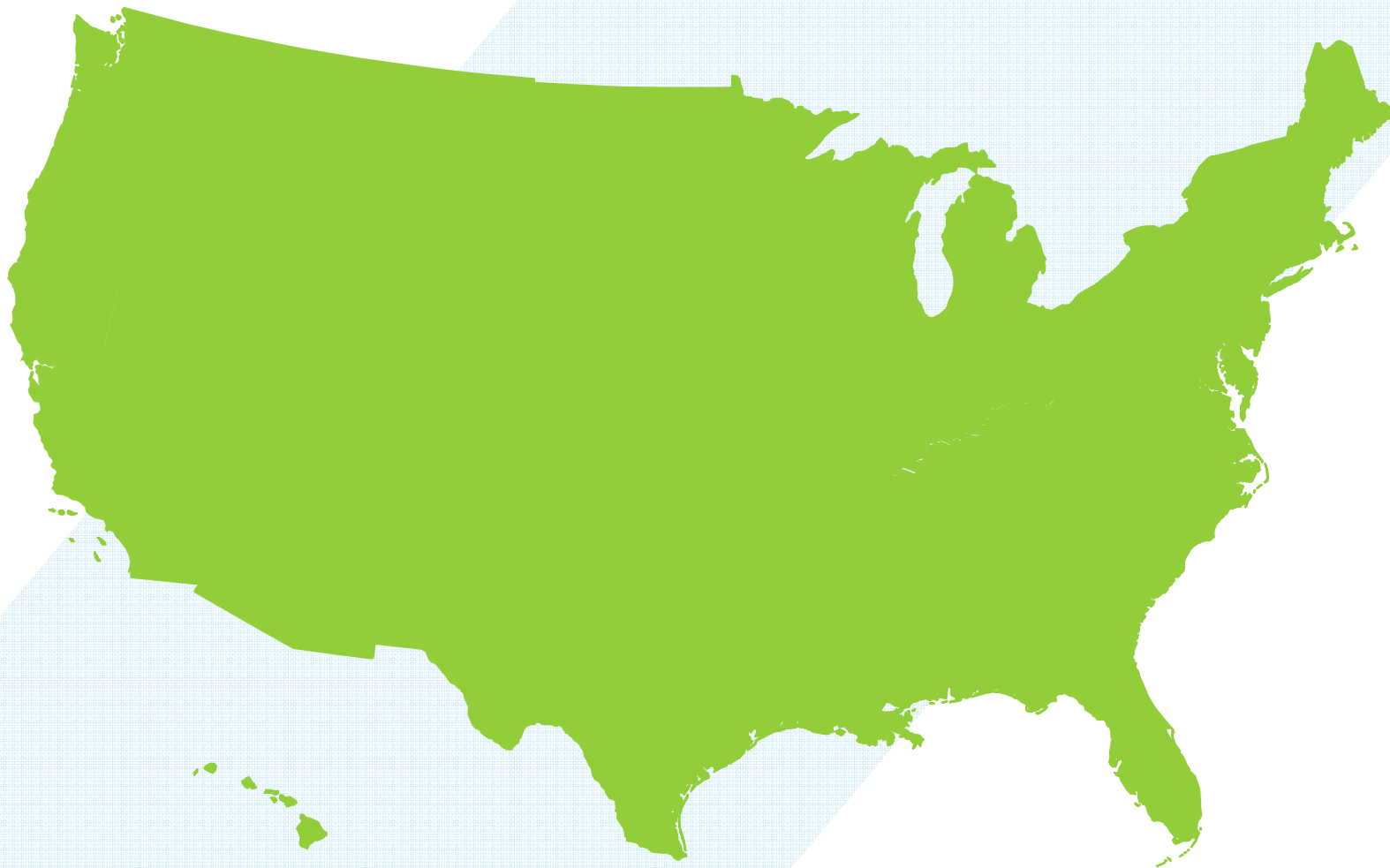
# A importância da C40

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# A importância da C40

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# As cidades estão fazendo





# As cidades controlam e decidem



City streets & parking **87%**



Outdoor lighting **80%**



Transit **63%**



Residential waste **66%**



Landfills **60%**



Building regulation **57%**



Water supply **60%**



City planning **50%**



# As cidades lideram as ações

Climate Action  
in Megacities:  
C40 Cities Baseline  
and Opportunities  
Version 1.0 June 2011

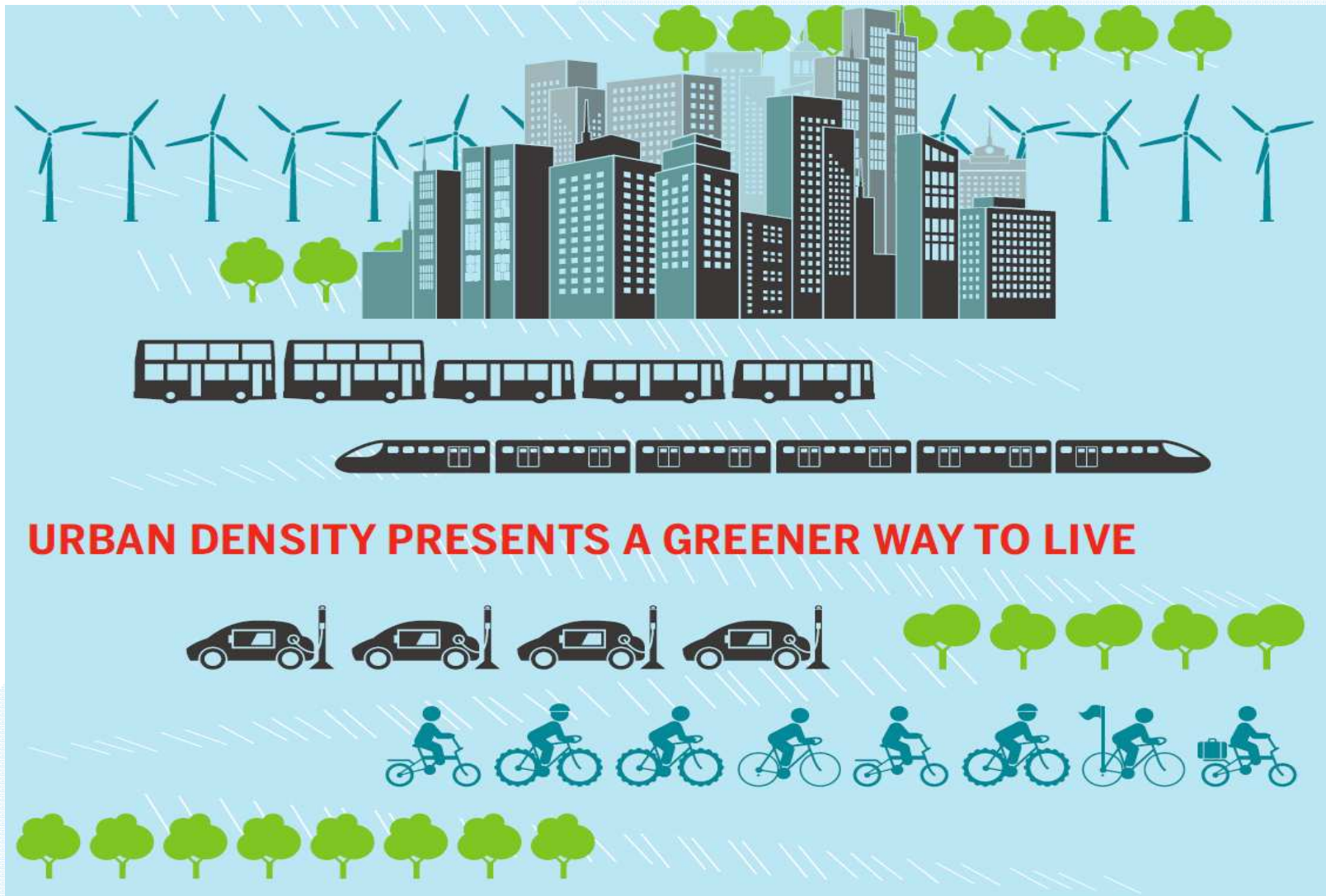
**4734**  
climate  
actions

ARUP C40  
CITIES



City streets & parking	<b>194</b>
Outdoor lighting	<b>121</b>
Transit	<b>417</b>
Residential waste	<b>156</b>
Landfills	<b>32</b>
Building regulation	<b>1343</b>
Water supply	<b>192</b>
City planning	<b>388</b>

# O que a C40 realmente faz?



# C40 cria **REDES TEMÁTICAS**

INTERCÂMBIOS  
TÉCNICOS

APOIO  
À PROJETOS

PESQUISA &  
CONHECIMENTO



**C40**  
**EXCHANGE**

**C40CITIES**

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# C40 promove **APOIO DIRETO**

INTERCÂMBIOS  
TÉCNICOS



**C40**  
**EXCHANGE**

**APOIO  
À PROJETOS**



PESQUISA &  
CONHECIMENTO



# C40 compartilha **CONHECIMENTO**

INTERCÂMBIOS  
TÉCNICOS

APOIO  
À PROJETOS

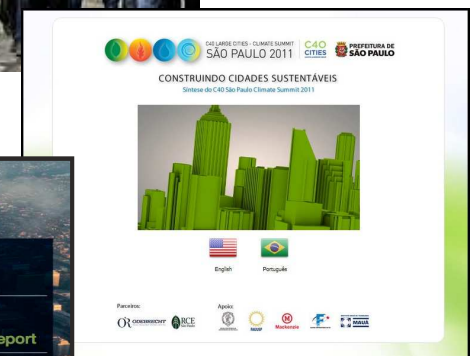
PESQUISA &  
CONHECIMENTO



**C40**  
**EXCHANGE**



CDP Cities 2011  
Global Report on C40 Cities



# As cidades estão **IMPACTANDO**

NATIONAL GEOGRAPHIC  
News Watch

City Solutions

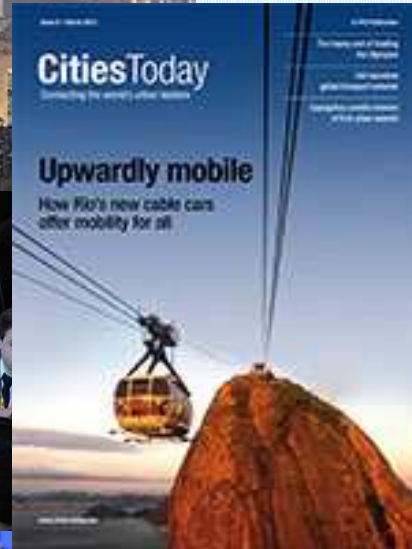
CitiesToday

Upwardly mobile

How Rio's new cable cars offer mobility for all

CNN

C40 LARGE CITIES CLIMATE SUMMIT  
SÃO PAULO 2011



c40saopaulosummit.com

PREFEITURA DE  
SÃO PAULO



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# Cidades estão liderando **AGENDA**

HUFF POST **GREEN**

Cities and climate change  
**Greening the concrete jungle**

America's cities are confronting climate change. They are also saving money

**Tackling Climate Change: New Reports Underscore Role Of Local Leaders**

An Unlikely Power Duo Emerges in the Global Fight Against Climate Change

REUTERS

**The Economist**

**The New York Times**

**Bloomberg: Mayors hold key to climate change progress**

**World Bank to Help Cities Control Climate Change**

By ALEXEI BARRIONUEVO  
Published: June 1, 2011

**Megacity mayors leading the fight for sustainable survival at the C40 summit**



**TIME**

**BBC WORLD NEWS**



**veja**

**CNN**

**Cities From London to Portland Slash Emissions as UN Climate Envoys Bicker**

**Mayors reach climate deal with World Bank**

(AFP) – Jun 1, 2011

**CHINADAILY**

**TORONTO SUN**  
torontosun.com

**indiatimes**

**The Jakarta Post**

# C40 está **IMPACTANDO**



CLIMATE+  
DEVELOPMENT  
PROGRAM

## VISION

Reinvent large-scale urban communities to reduce greenhouse gasses and provide urban laboratories for how cities can grow in ways that are environmentally sustainable and economically viable

Iniciativa  
Comunidades  
Sustentáveis:

CLIMATE+  
Development Program

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# Iniciativa Comunidades Sustentáveis: Duas Redes temáticas



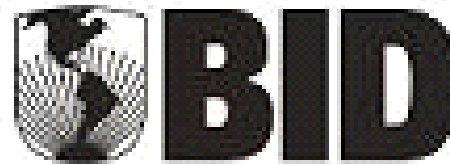
**(1) O Programa de Desenvolvimento Positivo ao Clima** reúne 18 projetos pioneiros pelo mundo que formalizaram sua intenção em serem líderes da agenda climática e reduzir as emissões em seus empreendimentos.

O programa é um laboratório urbano para grandes projetos de desenvolvimento urbano com foco em crescimento econômico sustentável com emissão zero. Foi criado para enfrentar o duplo desafio de rápido crescimento urbano e mudanças climáticas. Liderança: Estocolmo e São Paulo

**(2) Rede de Desenvolvimento Urbano Sustentável:** 22 cidades trabalham juntas para identificar áreas específicas sobre desenvolvimento urbano. VISION EXERCISE: São Paulo, Rio de Janeiro, Singapura e Melbourne.

# PROGRAMA DE TESTES COM ONIBUS ELÉTRICOS E HÍBRIDOS NA AMÉRICA LATINA

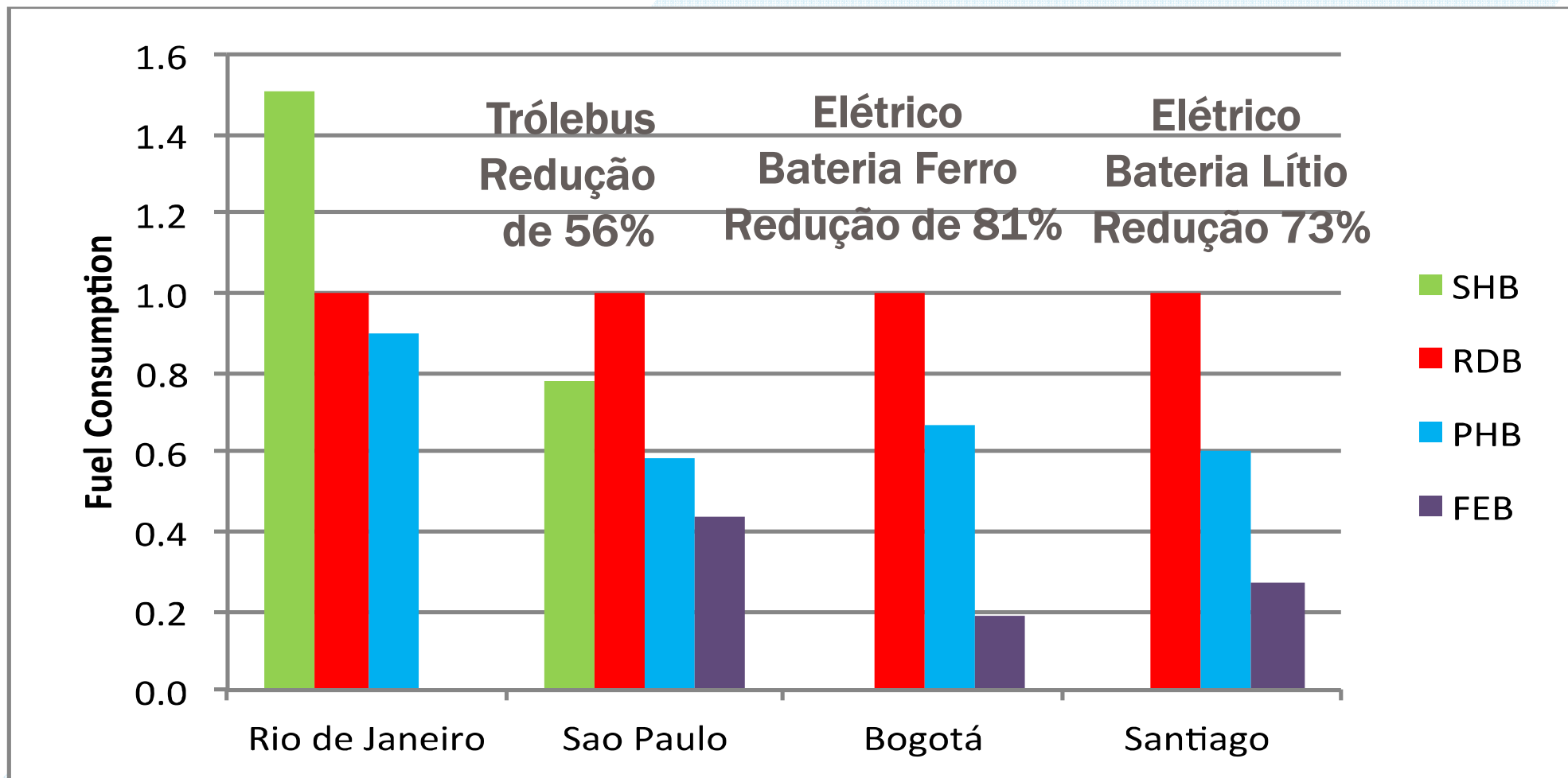
CLINTON  
**CLIMATE**  
INITIATIVE



## Bogotá, Rio de Janeiro, Santiago e São Paulo



# Conclusão geral sobre consumo energético



Híbridos: Redução média de 31%.

# **HYBRID ELECTRIC BUS TEST PROGRAM IN LATIN AMERICA: Economic Analysis of the Program**

*Prepared by:*

**Dalberg**

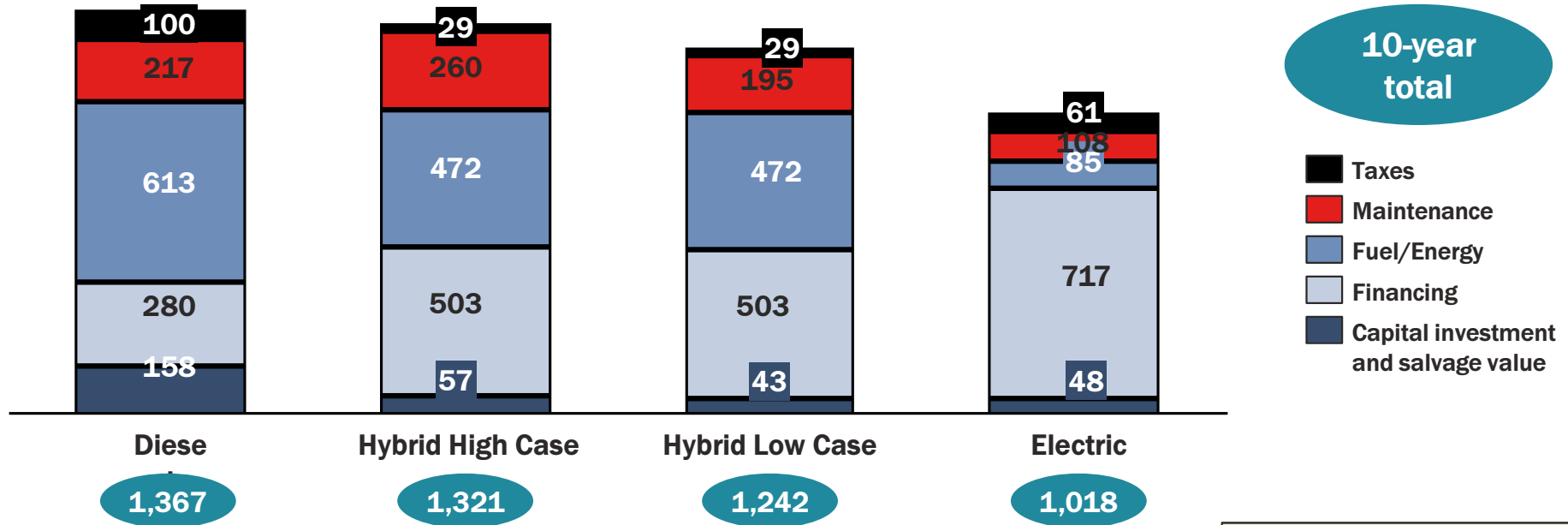
Global Development Advisors



# Lifecycle costs of hybrid and electric buses are lower than costs for diesel buses due to preferential financing options

Sao Paulo

Lifecycle Costs ('000 BRL, 10-Year Net Present Value)



<b>Financing</b>	10% interest 5 year term	5% interest 10 year term	5% interest 10 year term	5% interest 10 year term
<b>Maintenance costs</b>	(baseline)	+20% higher than diesel	-10% lower than diesel	-50% lower than diesel
<b>Salvage Value</b>	20% of bus value (BRL 98,600)	10% of battery value	30% of battery value	30% of battery value

- Electric buses achieve ~30% lower lifecycle costs than diesel
- Even with 20% higher maintenance costs, hybrids are more attractive than diesel

## Potential Fleet Transition in São Paulo, 2013-2023

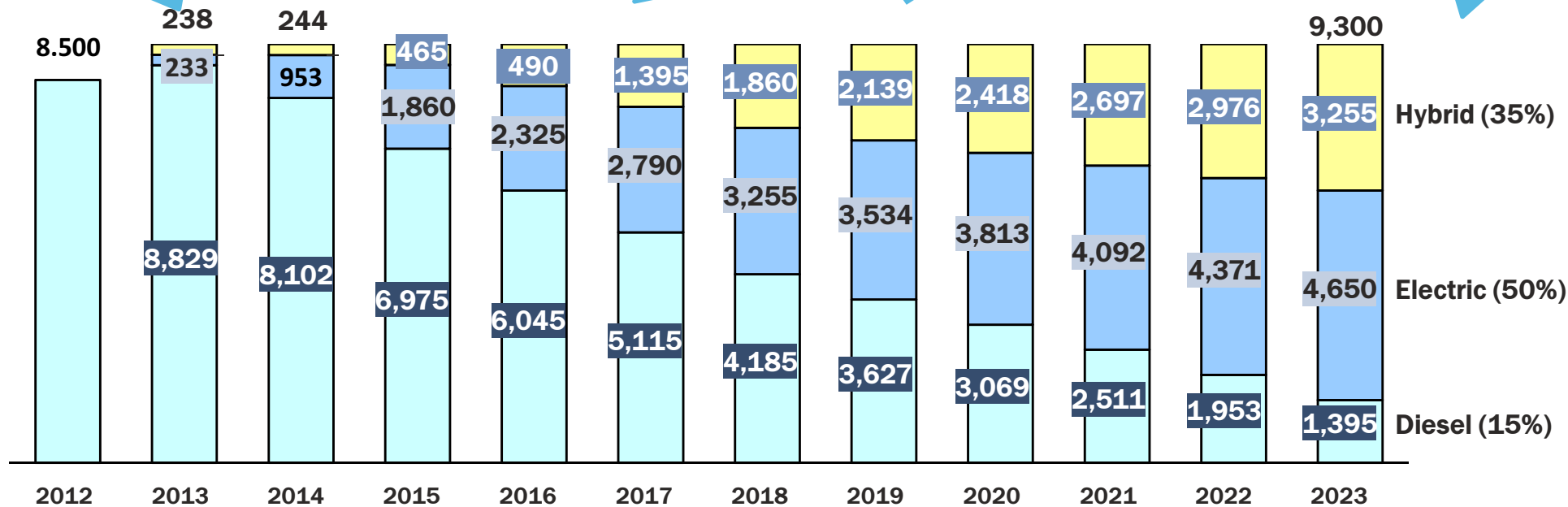
### São Paulo uptake: Fleet conversion will be required to meet mandates of Climate Change Law by 2018

Sao Paulo

- Additional ~800 buses enter service for BRTs; 1/3 of new BRT buses are hybrid
- Another ~250 electric buses enter service

Incremental conversion of ~2% of fleet to hybrid and electric buses annually, rising to 5% in 2016 and 10% in 2019

By 2023 over 3/4 of fleet is composed of hybrid or electric buses



#### Assumptions and Drivers of Change:

- Local production to avoid Import tax and/or reduction of taxes
- Climate Change Law provides exemption for hybrid (diesel) buses, catalyzing their growth
- Share of hybrid and electric buses in fleet reaches 55% by 2018; Remaining diesel buses shift to biodiesel blend & sugarcane to comply with Climate Law
- Share of hybrid and electric buses increases by 5% points in each year from 2014 to 2018, growth slowing starting in 2019

Source: Dalberg estimates based on projections and assumed annual conversion rates

# C40 OLHANDO PARA FUTURO

*Johannesburg to host 2014 Mayors Summit*



CITY OF JOHANNESBURG  
METROPOLITAN MUNICIPALITY



*C40 Cities Climate Leadership Group and World Resources Institute Partner to Promote City Transit Solutions*



*C40 & Siemens Announce Broad Collaboration on Cities and Sustainability*





# C40 OLHANDO PARA FUTURO

## CITIES ARE OUR FUTURE.

We believe that a better global future lies in urban innovation and action. As the majority of future humans will live in cities, it just makes sense that our solution to climate change will reside there too.



[www.C40cities.org](http://www.C40cities.org)

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# ACOMPANHEM NOSSOS PROGRESSOS

MUITO OBRIGADO!



@C40cities



C40 Cities

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