



# **PPPs & Climate Change for Green Cities – Brainstorming session**

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# PPPs...Climate Change....Green Cities

- **We want more infrastructure in our city...PPPs right?**
- **PPPs...too complex ?**
- **The Financing Matrix**
- **Climate Change Funds**
- **Quick look at key challenges for Urban PPPs**
- **Realities & concerns**
- **More info.....**

# Investment vs. Procurement vs. Governance

**When an infrastructure project is proposed, government should answer three key questions:**

- 1. Should the project be funded?**
  - This is the Investment Decision
- 2. How should the project be delivered?**
  - This is the Procurement Decision
- 3. What governance arrangements should be put in place?**
  - This is the Governance Decision

**How a project should be financed in the short term (PPP or non-PPP) is a separate question to the question of whether, and if so how, the project will be funded in the long term.**

**The issues considered in choosing between PPP delivery and other forms of delivery should interrogate how the delivery model will affect the achievement of the project objectives and investment KPIs**

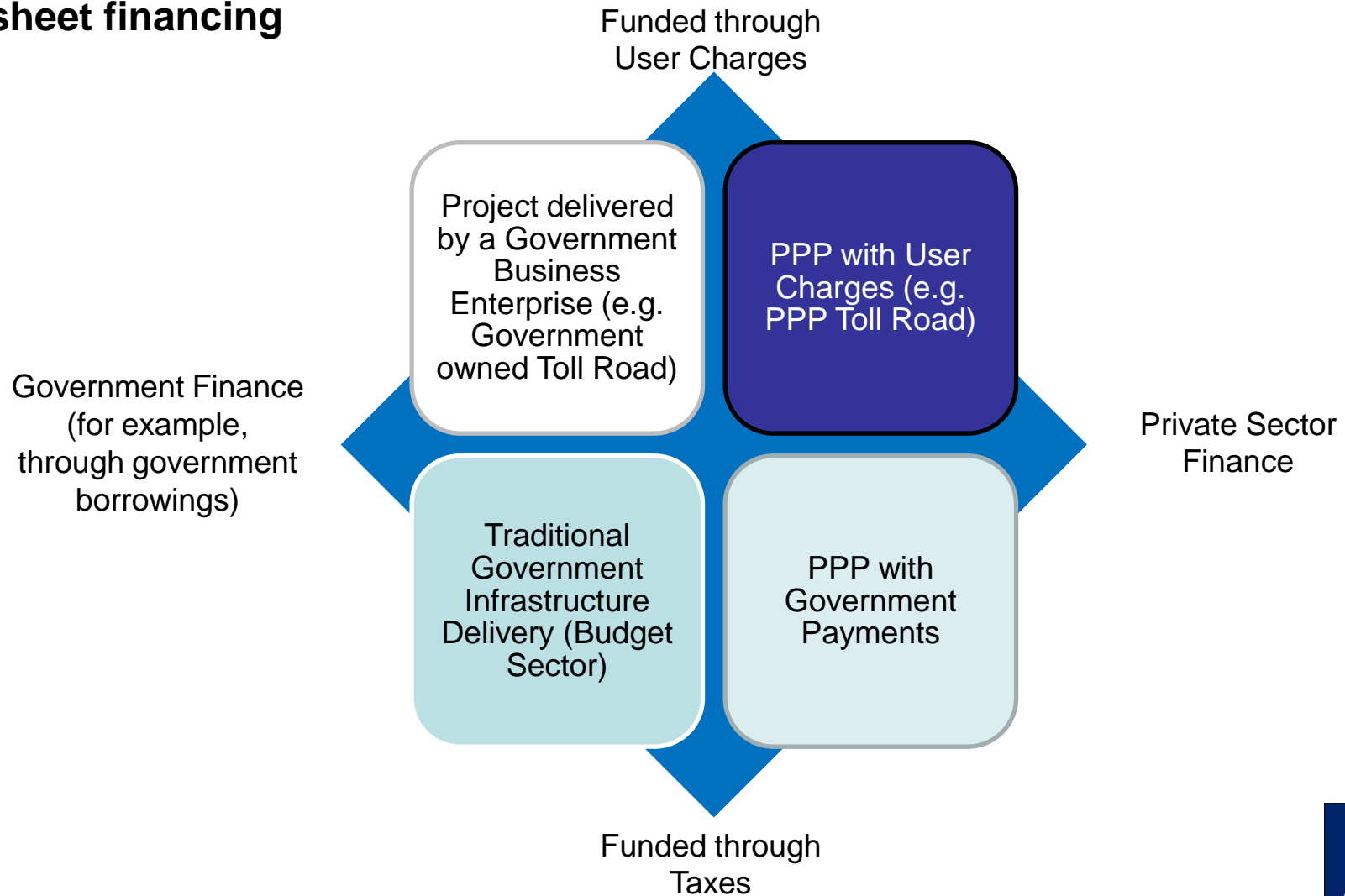
# Should PPP be considered ?

## Hypothetical Waste Treatment Plant

- **Is it large-scale and long-term?**
  - ✓ (\$100m plus, long-life asset)
- **Are there measurable outputs?**
  - ✓ (Treatment of waste to comply with environmental regulations etc)
- **Are there opportunities for risk transfer?**
  - ✓ (Design, construction, operation, incoming waste(?), energy cost(?))
- **Is there scope for innovation?**
  - ✓ (Significant scope in design, construction and operation)
- **Is there market capability and appetite?**
  - ✓ (Market testing; Private sector delivery and operation of waste treatment plants has occurred elsewhere)
- **Are there non-core services?**
  - ✓ (Operation of the plant)

# Financing Matrix

**PPPs are NOT off-balance sheet financing**



# Green Finance: Where does it fit

- **Maximize use of conventional finance**
- **Seek to leverage the private sector**
- **Specialist green financing**
  - Global Environment Facility
  - Climate Investment Funds
  - Export credit agencies
  - ADB funds

# Leveraging Concessional Resources: Global Climate Funds

Fund*	Commitments/ Pledges (\$ million)	ADB-Administered (\$ million)
<b>Mitigation</b>	<b>10,911</b>	<b>1,337</b>
Climate Investment Funds (CIF)-Clean Technology Fund (CTF)	5,200	1,174
CIF-Scaling-Up Renewable Energy Program for Low Income Countries (SREP)	505	35
CIF-Forest Investment Program (FIP)	639	31
GEF Trust Fund 1 to 4	3,057	67
GEF Trust Fund 5 - Climate Change Focal Area	1,260	25
GEF Trust Fund 5 - Sustainable Forest Management/REDD+	250	5
<b>Adaptation</b>	<b>2,074</b>	<b>274</b>
CIF-Pilot Program for Climate Resilience (PPCR)	1,300	270
GEF-Least Developed Countries Fund (LDCF)	255	0
GEF-Special Climate Change Fund (SCCF)	196	4
Kyoto Protocol Adaptation Fund (AF)	323	0
<b>Total</b>	<b>12,985</b>	<b>1,611</b>

\* Not a comprehensive list. Does not include other funds such as the Forest Carbon Partnership Facility (\$435 million) and the UN REDD Programme (\$119 million)

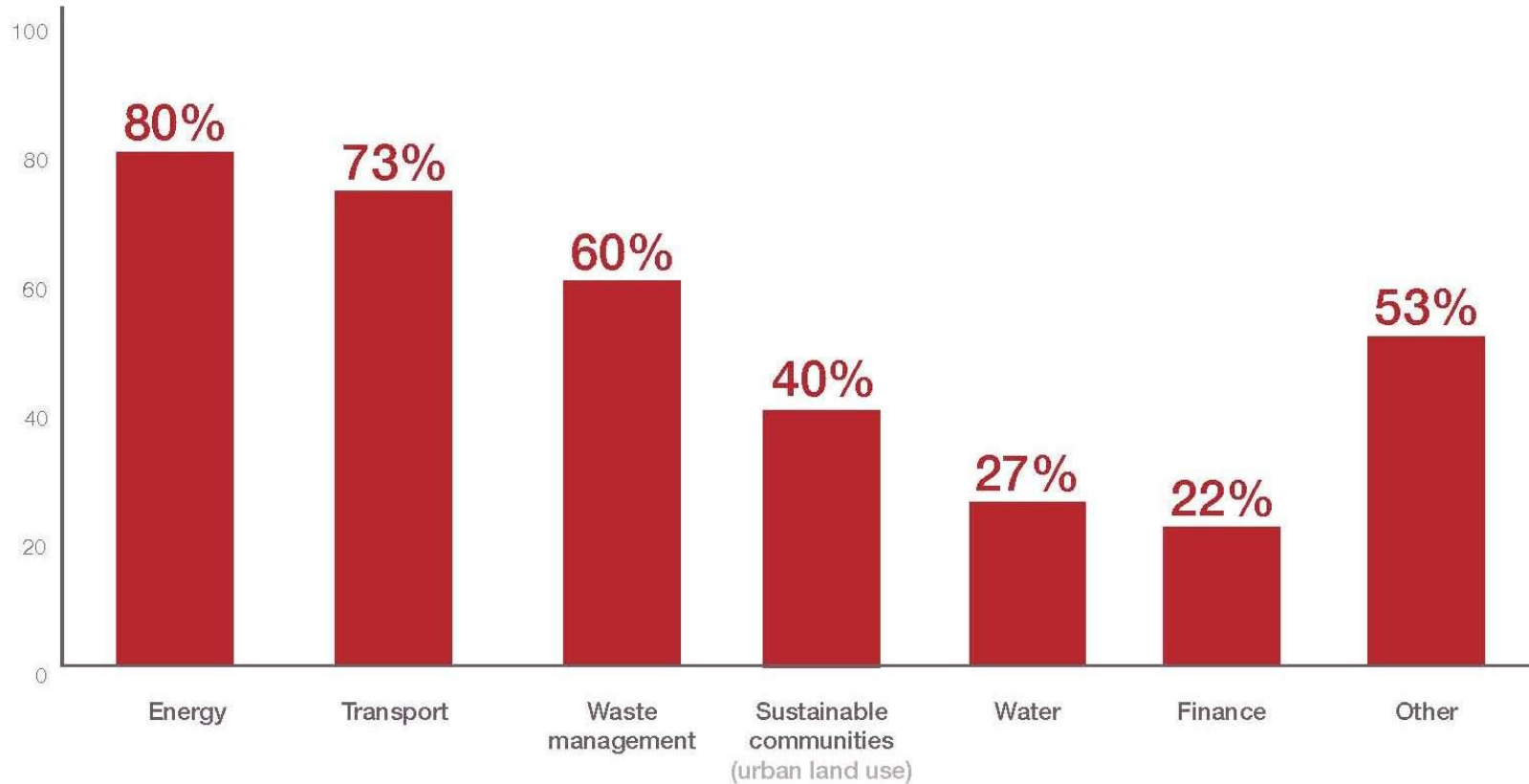
# Deploying Concessional Resources: Internally-Managed Funds

<b>Clean Energy Financing Partnership Facility</b>	<b>275.0</b>
Clean Energy Fund (Multi-donor)	62.10
Asian Clean Energy Fund (Japan)	57.10
Carbon Capture and Storage Fund (Australia)	74.30
Canadian Climate Fund for the Private Sector in Asia	81.50
<b>ADB Climate Change Fund</b>	<b>49.3</b>
Clean Energy	29.5
REDD and Land Use	5.8
Adaptation	13.9

These funds are on top of traditional ADB resources sources such as OCR and ADF. The list does not include carbon funds , and funds that are broader in scope but support climate actions as well such as the Water Financing Partnership Facility, Urban Financing Partnership Facility



**Fig. 32** City-wide emissions reduction activities reported by C40 cities, by category (% of cities).



**Note:** The energy category is comprised of actions reported under Energy demand in buildings, Energy supply and Outdoor lighting. Sustainable communities is made up of actions in the Urban land use category. The other category includes actions reported under Education, Public procurement, Food and Other.

# Examples from ADB portfolio / Efficient bus rapid transit

- **MONGOLIA: Urban Transport Development Investment Program**

The project's first tranche will (i) widen Peace Bridge with two dedicated bus rapid transit (BRT) lanes; (ii) upgrade 7.7 km of road allocated for the North-South BRT corridor; (iii) rehabilitate electric trolleybus infrastructure along the North-South BRT corridor (14 km); (iv) prepare the North-South BRT corridor; (v) introduce an intelligent transport system (ITS); and (vi) promote capacity building and skills transfer.

Total Loan Amount: \$29.7 million (OCR)      \$30.2 million (ADF)

Clean Energy Investment: \$4.24 million    (GEF \$ 1.5 million)

Board Approval: 08 November 2012

- **BAN: Greater Dhaka Sustainable Urban Transport Project (GEF/ADB)**

The project will contribute to develop a sustainable UTS in GCC, which forms part of north Greater Dhaka, through the delivery of a 20-kilometer (km) bus rapid transit (BRT) corridor. This pilot project provides a holistic solution for integrated urban mobility, bearing a demonstration effect as no modern mass transit system exists in Bangladesh yet.

Total Loan Amount: \$ 100 million (OCR)      \$ 60 million (ADF)

Clean Energy Investment: \$ 20.14 million    (GEF: \$ 4.6 million)

Board Approval: 17 April 2012



# Climate proofing infrastructure

- **BANGLADESH:**

**Coastal Climate-Resilient Infrastructure (ADB/CIF-PPCR)**

The project will enhance climate resilience of coastal infrastructure in 12 rural coastal districts by upgrading , widening and rising of embankments, with suitable slope protection against erosion and wave action

**Total Loan Amount: \$50 million \$      CIF-PPCR (Loan) \$ 20 million**  
**CIF-PPCR (Grant): \$ 10 million**

**Board Approval: 28 September 2012**

- **CAMBODIA:**

**Cambodia Climate Proofing Infrastructure in the Southern Economic Corridor Towns (ADB/CIF-PPCR)**

The project will increase climate resilience by supporting flood control measures that will significantly improve the productivity of economic enterprises in the towns.

**Total Loan Amount: \$37 million    CIF-PPCR (Loan): \$5 million**  
**CIF-PPCR (Grant): 4.4 million**

**Board Approval: 10 December 2012**



# Waste to energy

- **PRC:**

**China Everbright Environmental Energy Limited**

**The project is to support the construction and operation through PPP WTE projects with advanced clean technologies including grate incinerator technology, and advanced flue gas emission control. This will serve the need to treat MSW in secondary cities of the PRC and supply electricity to the local grid. Each WTE plant incinerates waste, recovers waste heat for power generation, purifies waste gas, treats leachate, and disposes of ash.**

**Total Loan/Partial Credit Guarantee Amount: \$100 million (OCR)  
\$100 million (PCG)**

**Board Approval: 4 June 2009**

**Greenhouse Gas Emission Reduction: 350,000 tCO<sub>2</sub> /year**

# Example: Pilot green energy schemes for low carbon city (Changning district, Shanghai)

## Green buildings

TA retrofitting existing buildings  
Investment and TA on new zero emission bldg  
TA on MRV  
Investment in retrofitting existing and constructing zero emission

## Low carbon Energy Mix

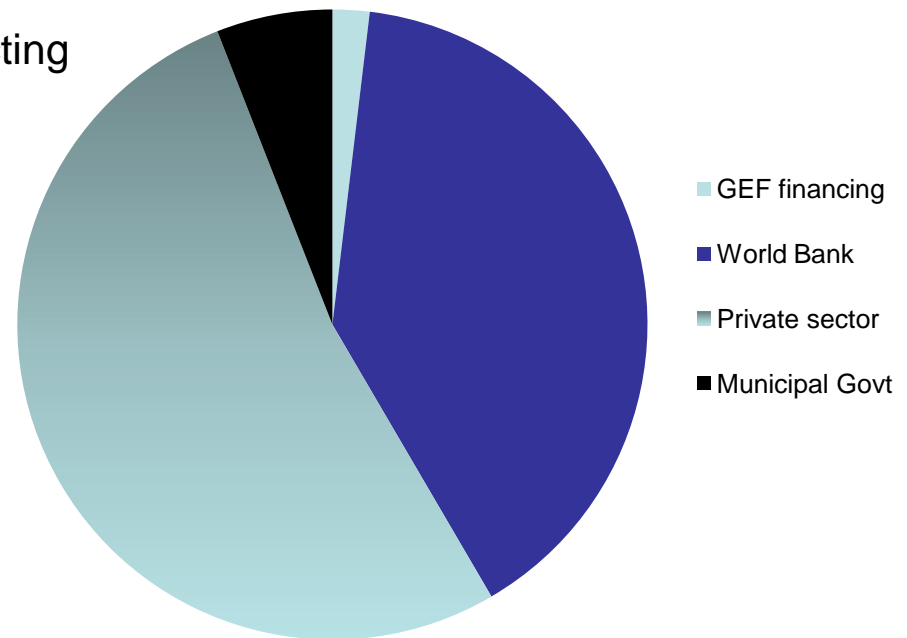
TA on low C distributed generation  
TA for increased purchase of green electricity  
Investment in low C energy mix

## Green transport

Integrated policies, parking fees, shuttles  
Feasibility of e-vehicles

## Integrating green energy schemes

**Financing Partners: \$ 252 million**

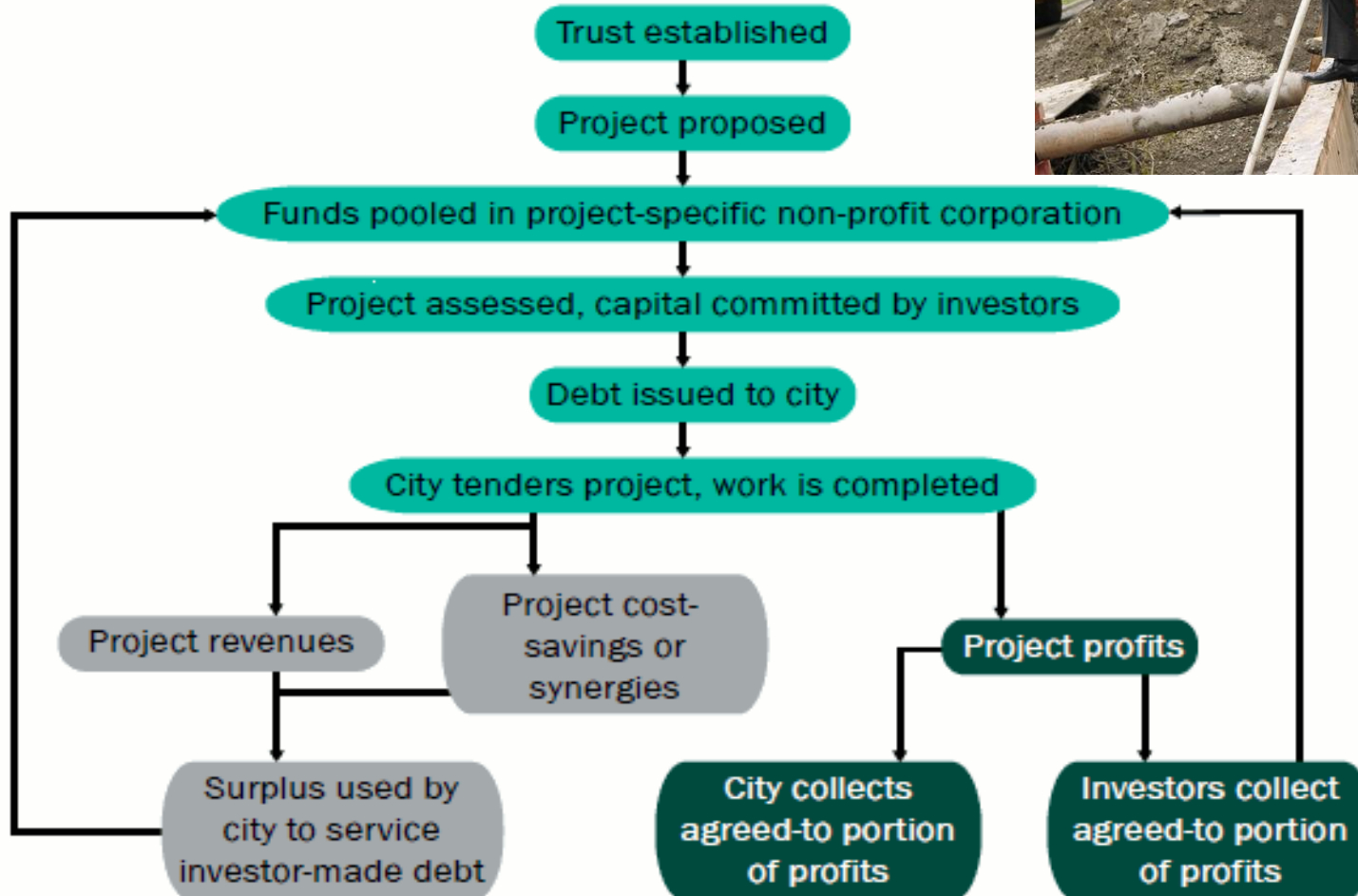


# Urban PPPs - Key challenges

- **Project documents (bid, concession agreement, etc.)**
  - Not standardized - leads to a lot of scope for negotiation between Concessioneing Authorities and bidders during development, execution and operations. This leads to delay in project development and execution having residual risks.
  - Lender's interests are to be adequately and appropriately protected in the Concession Agreements like in the model concession agreement of transportation or power sector.
- **The “User pay” principle**
  - Not yet established for urban infra services – leaving the private sector to lead on behalf of the government with respect to pioneering user charges collection.
  - Various models of may be encouraged in a gradual sequence with a better coordination between Federal and State Governments so that the Developers and Users at large can slowly graduate to the concept of user pay principle rather than attempting the same overnight.

# Realities & concerns

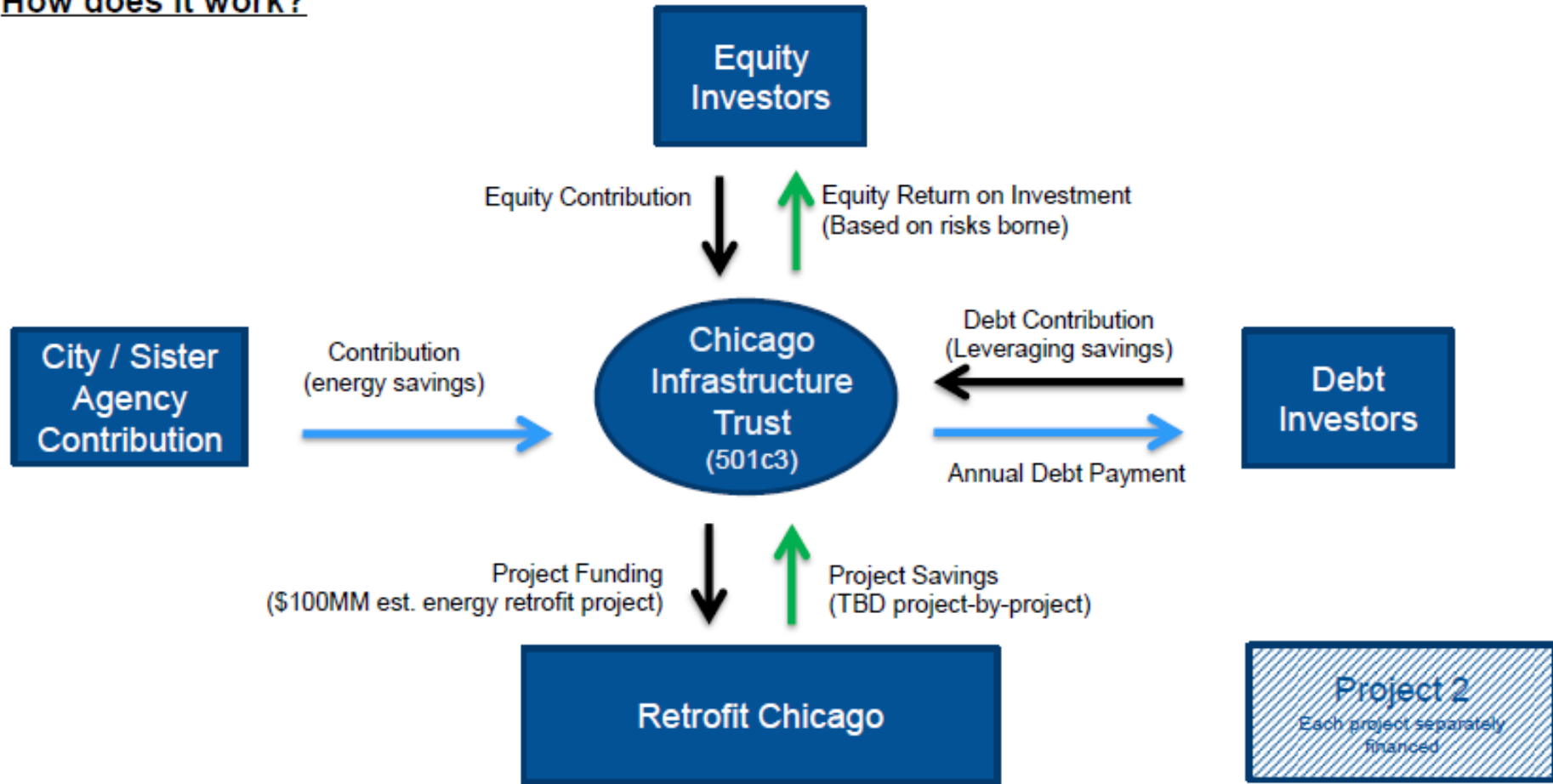
## Chicago Infrastructure Trust



Source: Chicago mayor's office

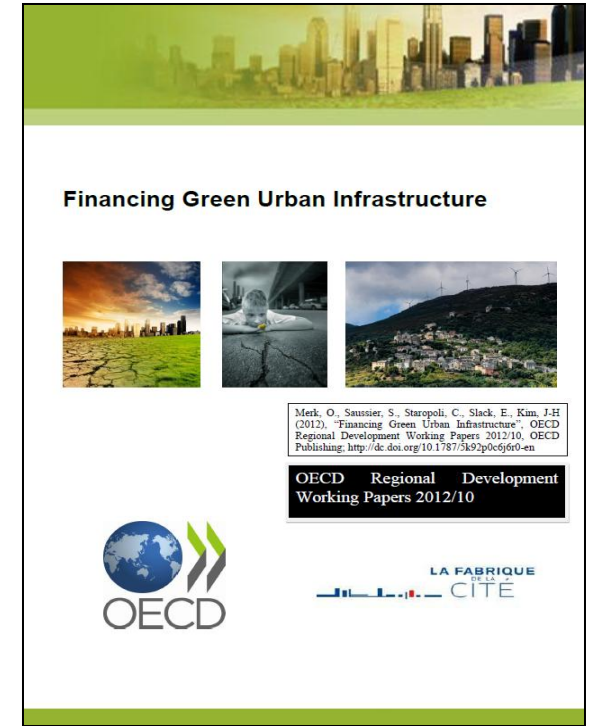
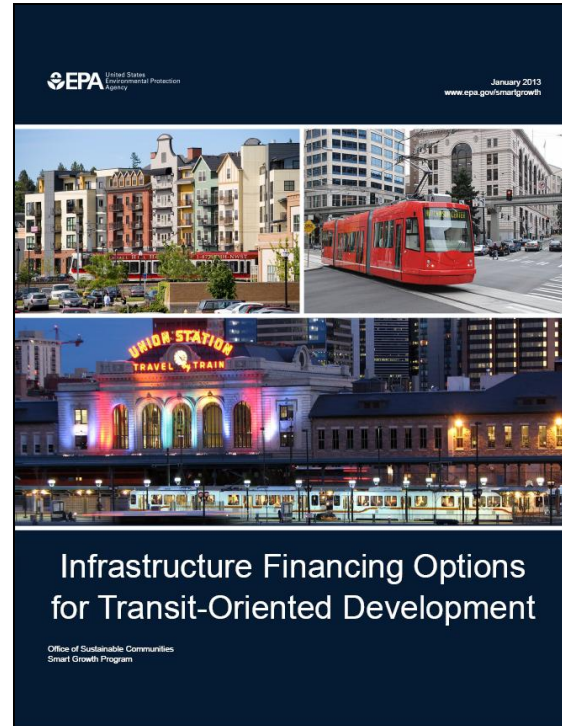
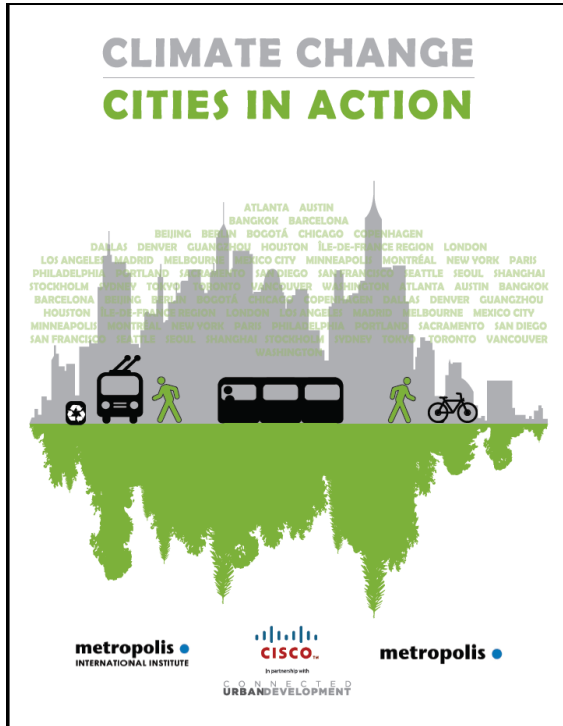
# Urban Infrastructure Trust

## How does it work?





# More info... thinking space....



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