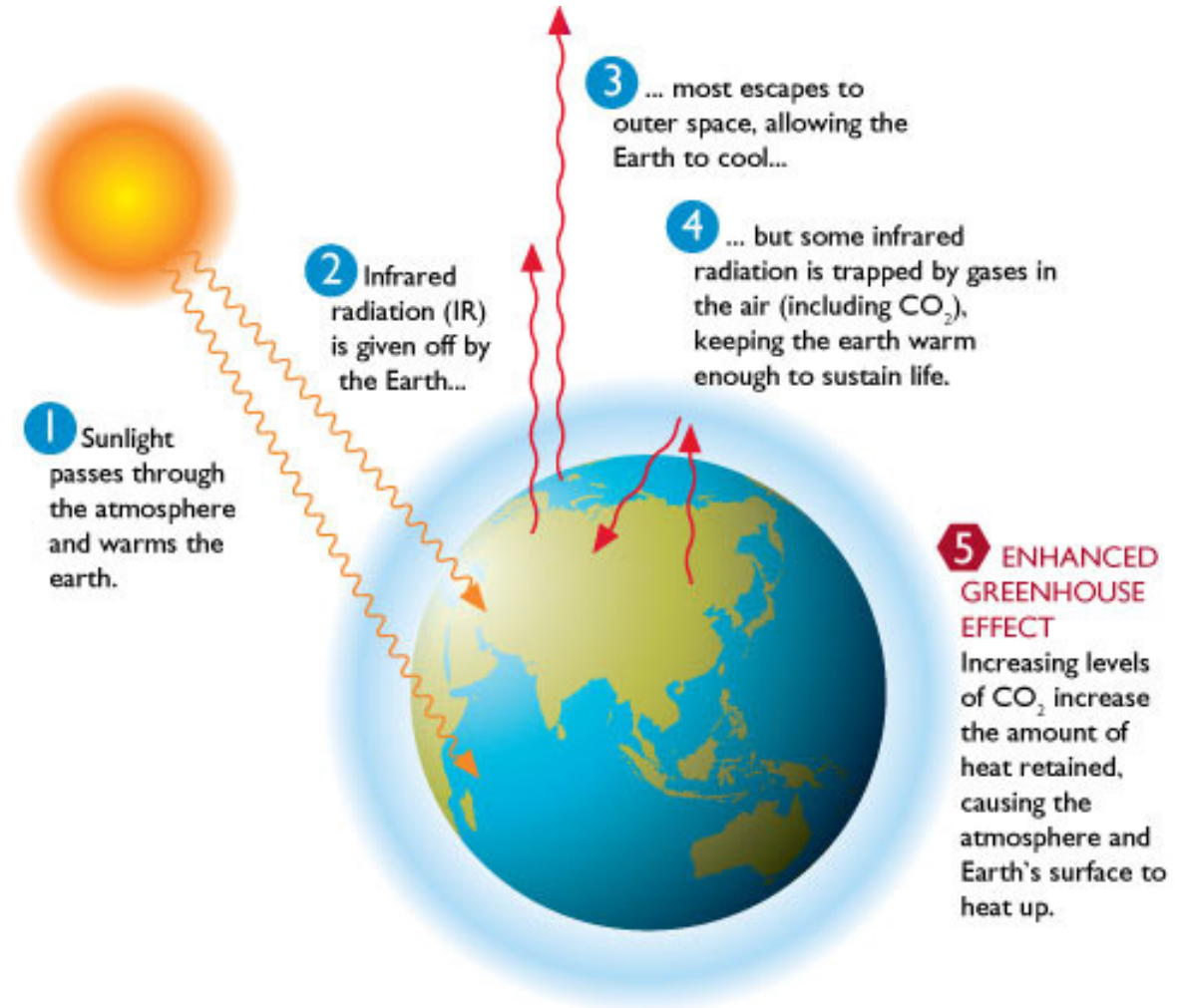




illuminaLED
Venture Fund

THE ISSUE

CO₂ is the main contributor to the greenhouse effect:



THE ISSUE

- ✓ The United States is now the second largest carbon dioxide emitter in the world
- ✓ Carbon dioxide represents an important threat as the gas emitted can stay in the atmosphere for thousands of years
- ✓ The US did not ratify the Kyoto agreement by fear that it was too costly and would hurt the economy

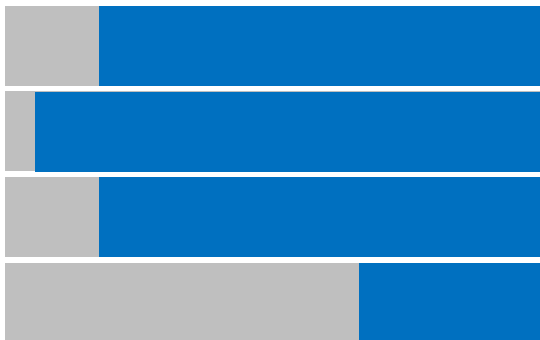
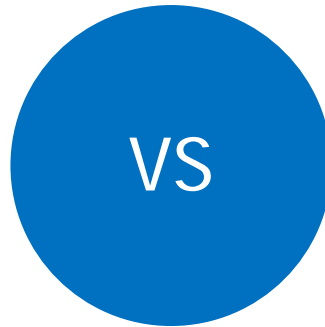


LED LIGHTING



HPS vs LED

95% of municipalities in the US use HPS for street lighting

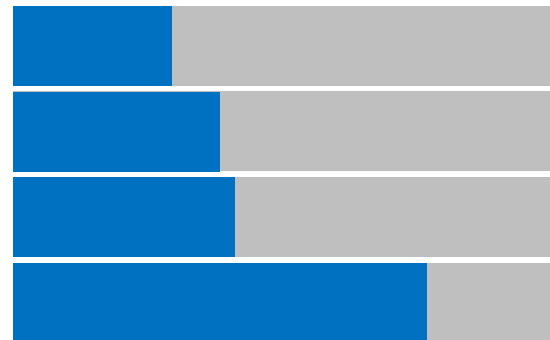


Energy usage

Maintenance cost

CO₂ emission

Cost

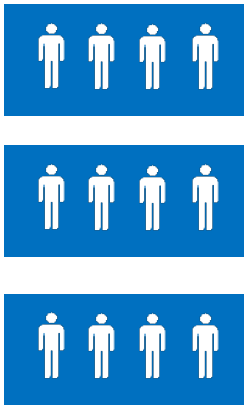


ENVIRONMENTAL IMPACT

Replacing 100 HPS lamps by LED lightings



Decrease of 125 tons of carbon dioxide per year



ENVIRONMENTAL IMPACT

Replacing 3 million HPS lamps
with LED lightings

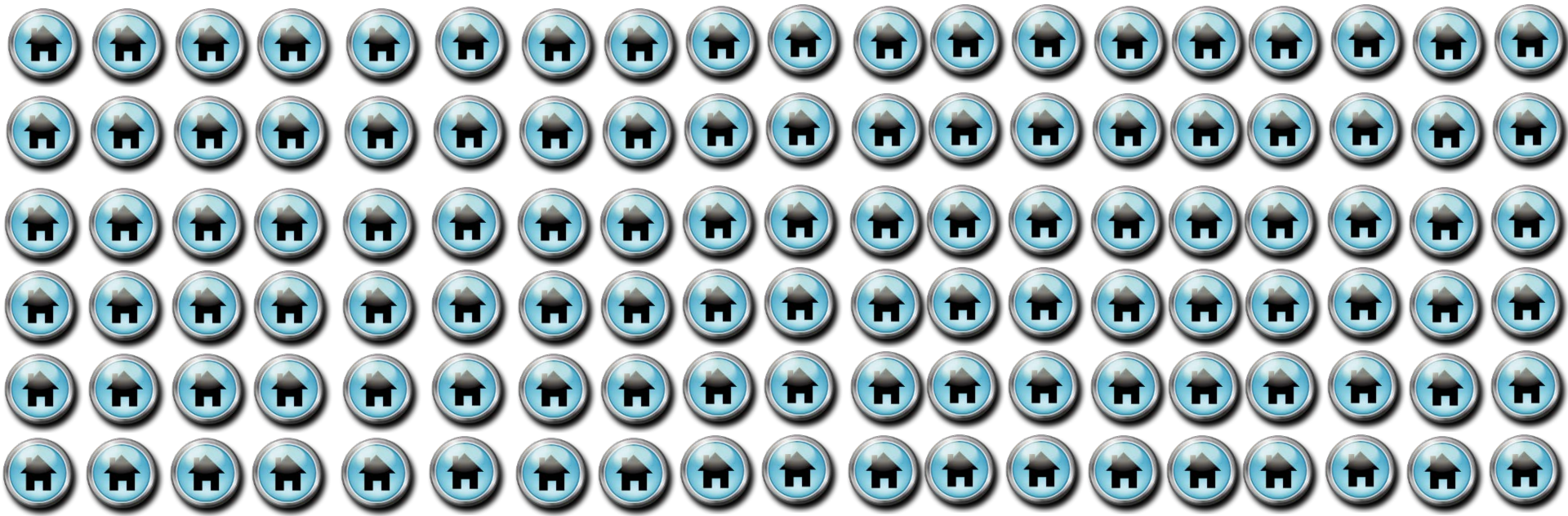
=



3.75 million tons of CO₂
each year

This is equivalent to the annual energy consumption of
90,000 households

**1 lamp = 1.25 tons of carbon dioxide emission reduction annually



BENEFITS OF LED FOR MUNICIPALITIES



Energy Savings



Maintenance Cost Savings



And Much More...

CASE STUDY: LOS ANGELES

From changing 140,000 street lamps

\$7.5 Million

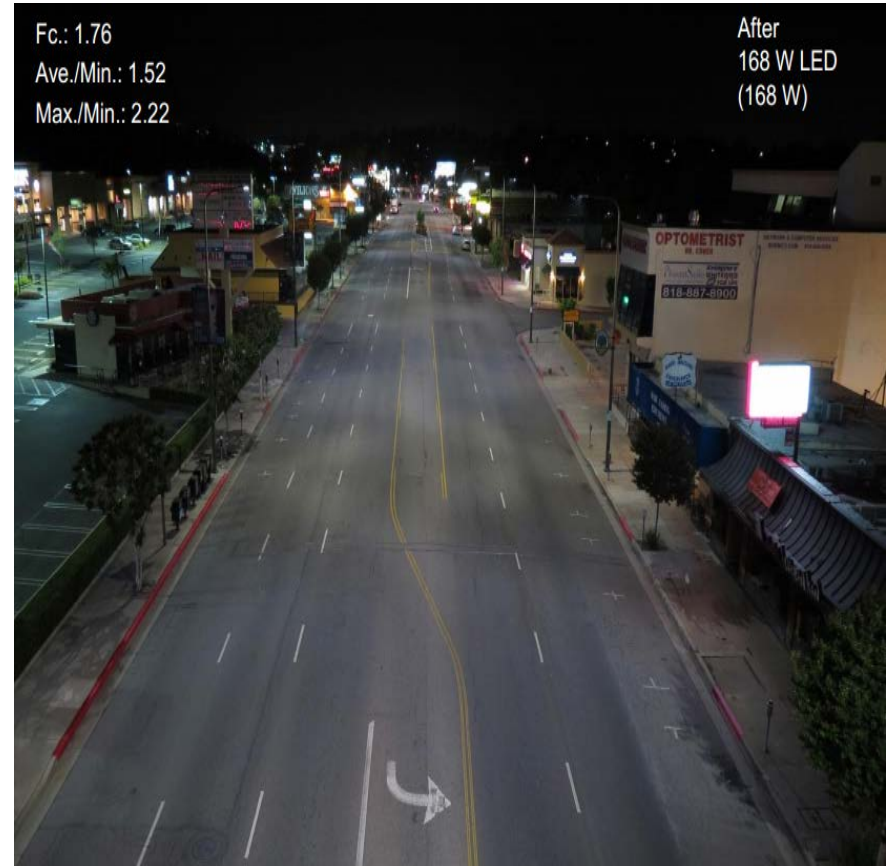
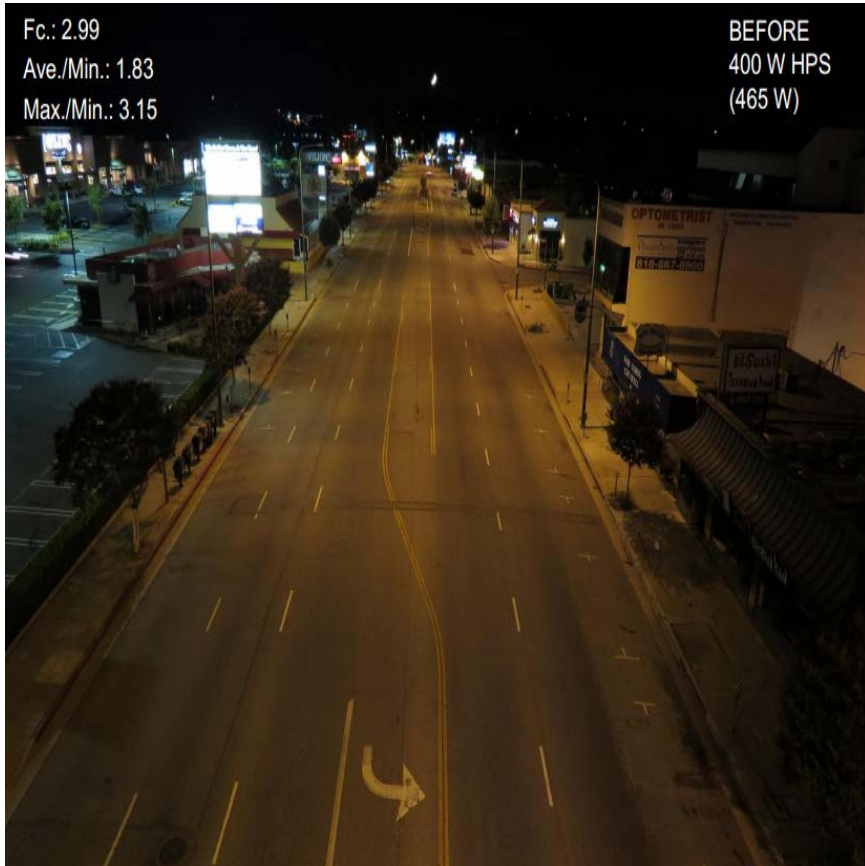
Electricity savings per year

\$2.5 Million

Maintenance savings per
year

BEFORE AND AFTER

Real life example – Ventura Blvd in Los Angeles



BEFORE: 400 W HPS (465 W)

AFTER: 168 W LED (168 W)

ADDITIONAL IMPACT

ENVIRONMENTAL

Reduction of carbon dioxide emissions

ECONOMIC

Increasing energy efficiency at no additional economic burden to the tax payer

Job creation related to the replacement of the lighting system

SOCIAL

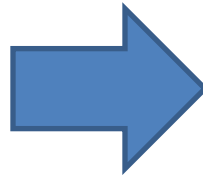
Electricity cost savings can be reinvested into new projects by the municipality

WHY HAVE ONLY 5% OF MUNICIPALITIES MADE THE SWITCH?

- ✓ Large upfront initial investment
- ✓ Tight municipal budgets
- ✓ Lack of awareness

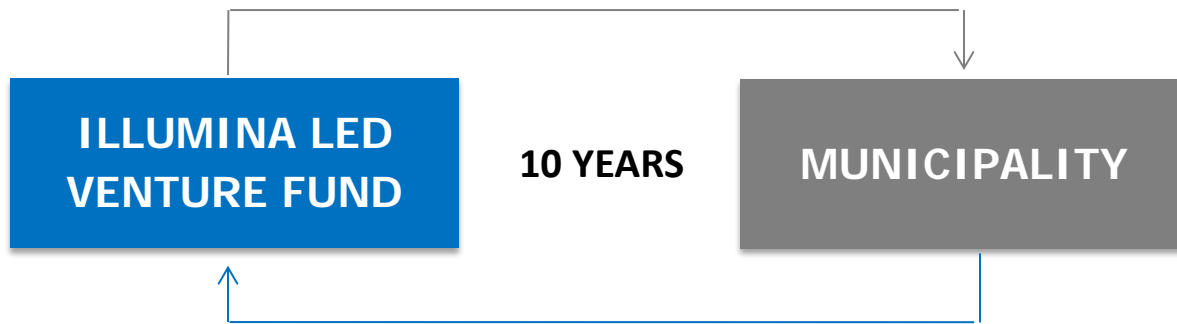
ILLUMINA LED VENTURE FUND

We provide a cost effective solution for municipalities to convert their street lamps from HPS to LED



ENERGY MANAGEMENT CONTRACT

We purchase and install LED streetlights



Municipalities pay us a fixed portion of the energy savings

FUND PROFILE

Infrastructure Fund

EQUITY

Target size: USD 185,000,000

Minimum investment for individuals:
USD 500,000

Minimum investment for institutions:
USD 2,500,000

Term: 6-year, closed-end fund

Target IRR: 35%*

Fees: 2% management fee, 20%
carried interest

*Conditions subject to change

ABS

Target size: USD 280,000,000 per
round (3 rounds)

Minimum investment for individuals:
USD 500,000

Minimum investment for institutions:
USD 2,500,000

Term: 9 years

Payment structure: Annual cash flows
from EMC contracts

Annual Return: 6%

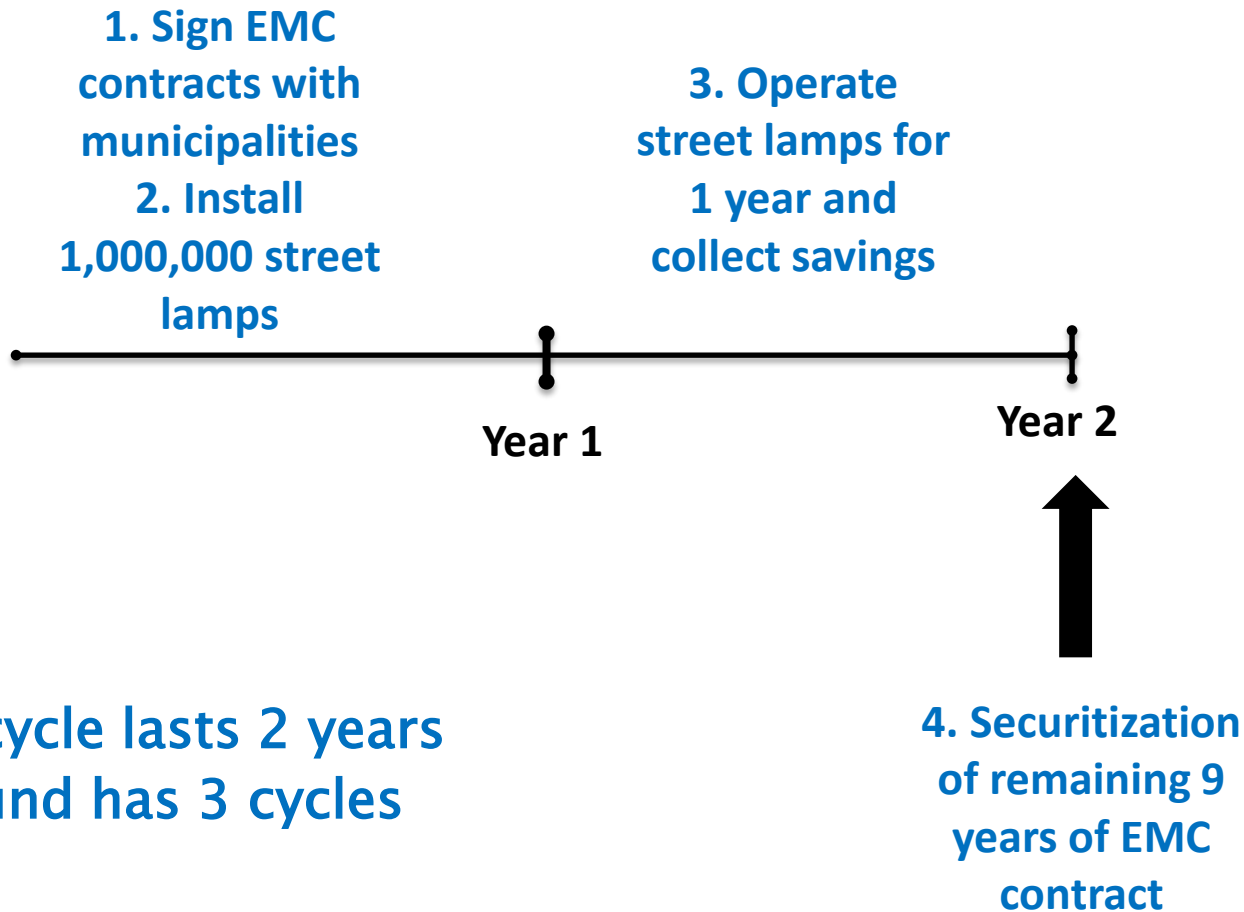
TARGET MARKET

US Municipalities:

- ✓ Over 100,000 residents
- ✓ Investment grade rating
- ✓ Potential market size: 258 municipalities

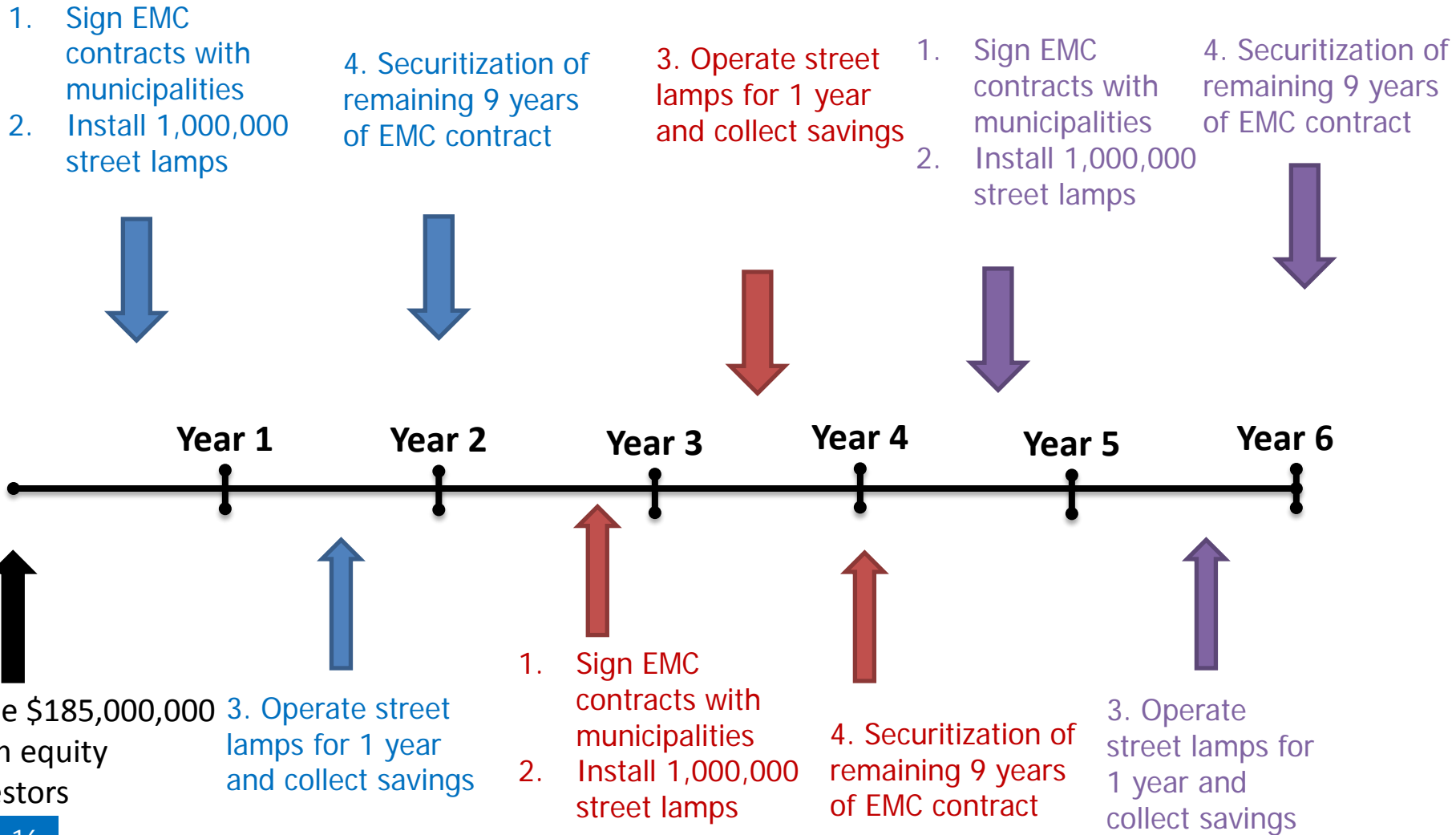
Only 36 cities needed to reach
the 3,000,000 street lamp objective

INSTALLATION AND SECURITIZATION CYCLE



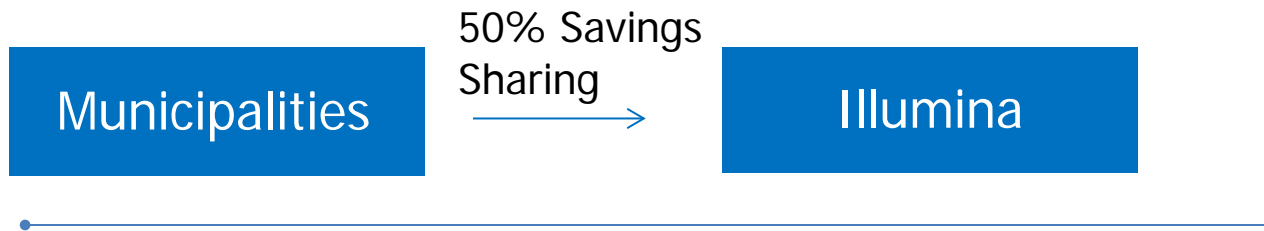
- ✓ Each cycle lasts 2 years
- ✓ Our fund has 3 cycles

THE ROAD TO 3 MILLION LAMPS...

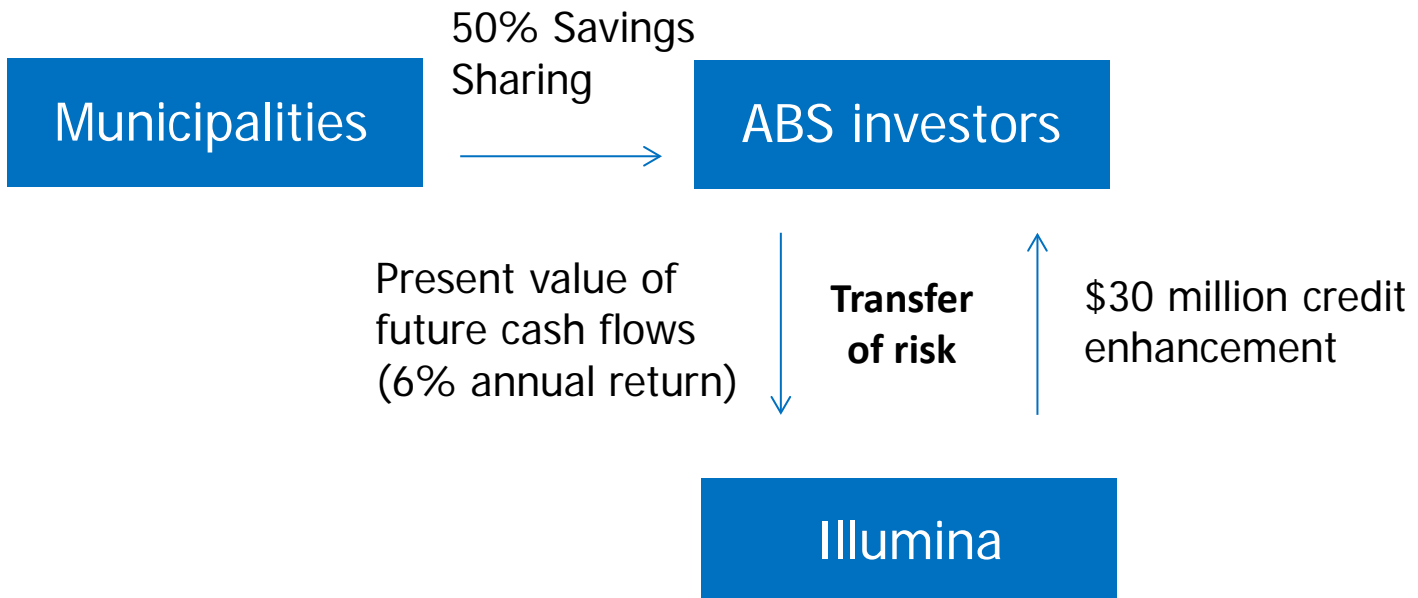


SECURITIZATION

Year 1



Year 2 to Year 10



FINANCIAL MODEL

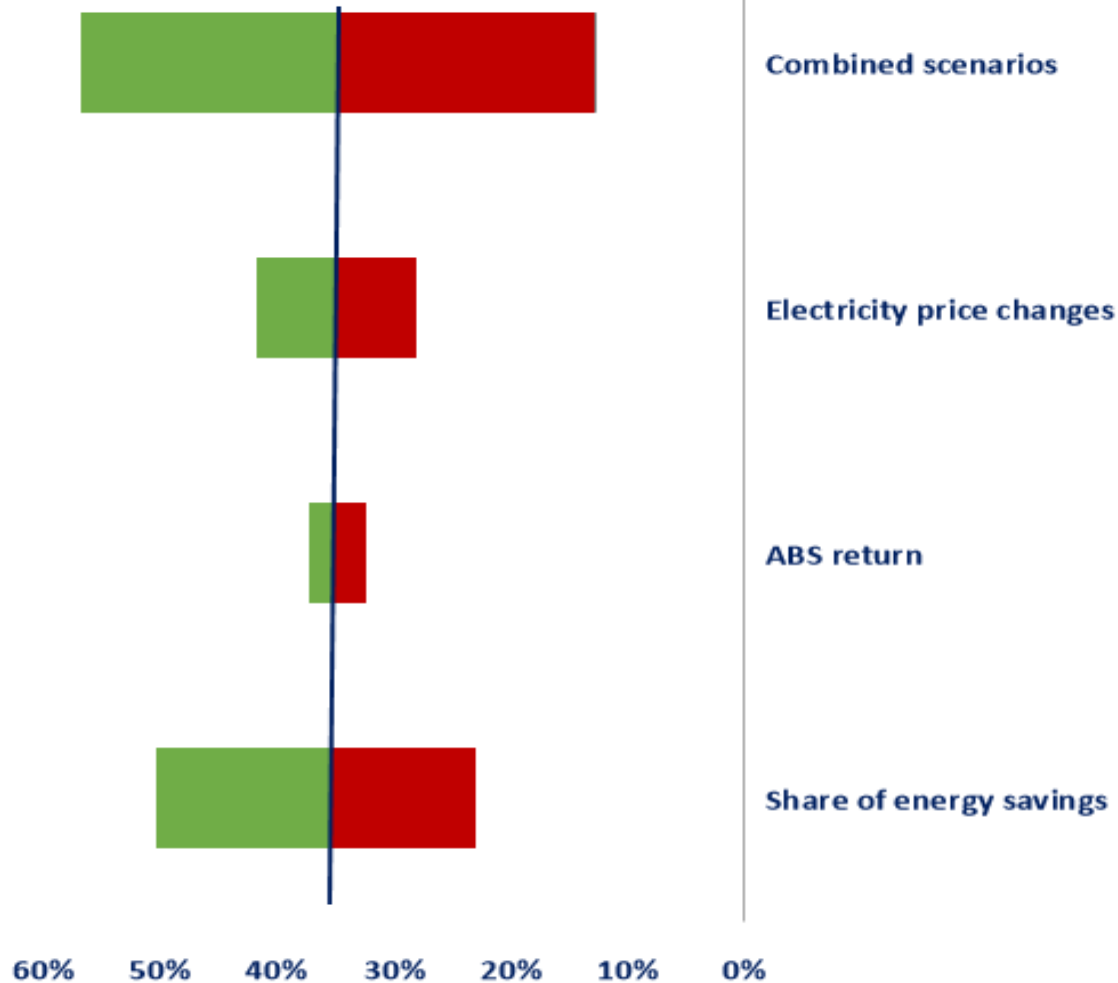
	1	2	3	4	5	6
Revenues from operations		39,740,470		40,539,253		41,354,092
Securitization income	0.00	277,486,141	0.00	283,063,613	0.00	288,753,191
Total Expenses	4,500,000	6,449,722	4,149,000	6,561,272	3,832,222	6,675,063
Installation cost	180,000,000	0	162,450,000	0	146,611,125	0.00
Injection into SPE	0	30,000,000		30,000,000		30,000,000
Net cash flow	500,000	320,517,359	-166,599,000	327,580,848	-150,443,348	334,786,313
Fund's cash position before distribution	500,000	321,017,359	30,883,672	339,006,600	37,712,651	347,668,894
Dividend to equity holders	0	123,534,687	19,457,920	150,850,602	24,830,069	347,668,894
Retained cash	500,000	197,482,672	11,425,752	188,155,998	12,882,581	0
Fund's ending cash position	500,000	197,482,672	11,425,752	188,155,998	12,882,581	0

MODEL ASSUMPTIONS

- ✓ Investment per light: \$180
- ✓ Energy savings from switch to LED: 70%
- ✓ Yearly increase in electricity: 1%
- ✓ Share of energy savings with municipalities: 50/50
- ✓ Asset Backed Security (ABS) annual return: 6%
- ✓ Management fee structure: 2/20

IRR

SENSITIVITY ANALYSIS



- ✓ Fund IRR 34.83%
- ✓ The share of energy savings is the main determinant

RISK FACTORS



Technological Risk

We only purchase
from CE certified
LED
manufacturers



Default Risk

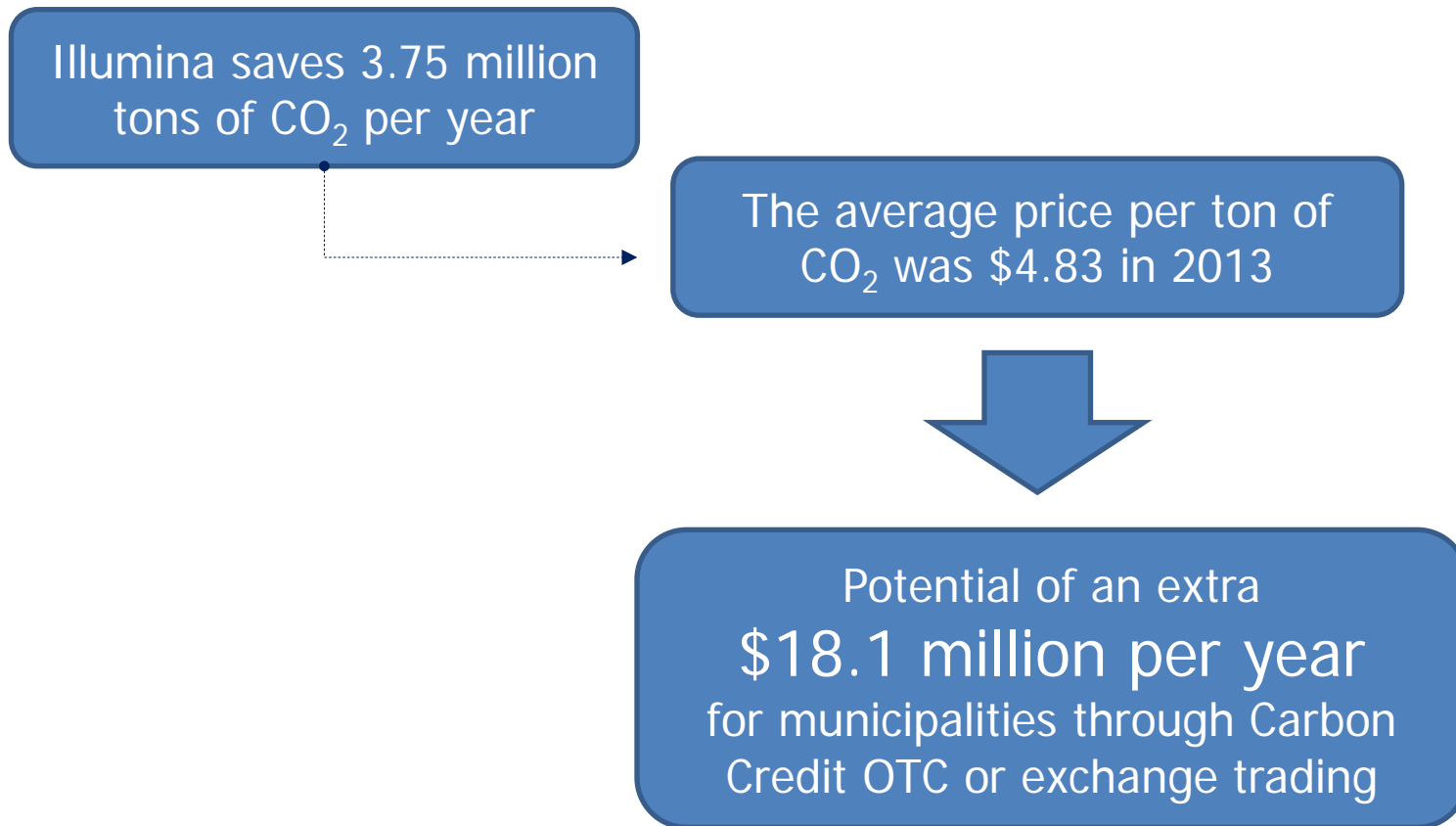
Transfer of risk
through ABS

SCALABILITY

USA

CHINA

ADDITIONAL INCOME OPPORTUNITY: CARBON MARKET



A GREENER AMERICA, A GREENER WORLD

UN Panel: Climate change will cost trillions and trigger hunger, floods, conflicts and mass migration all around the world.

Decreasing the US carbon footprint is an important step in the fight against worldwide climate change.

IN SHORT

- ✓ **Simple** Solution
- ✓ **Proven** Efficiency
- ✓ Large Potential **Impact**

... and an **attractive return** to investors

ARE YOU READY FOR THE LED REVOLUTION?



APPENDIX: LOS ANGELES

- ✓ In 2009, they converted 140,000 streetlights to LED (they have 210,000 streetlights)
- ✓ 4 years cost: \$57 million.
- ✓ Reduced energy consumption by 63.3%, 68,000MWh/year
- ✓ \$7.5 million/year, maintenance savings of \$2.5 million/year

APPENDIX: CITIES AND STREETLAMPS

City	Pop	Rank	110 SL/1000p	75 SL/1000p
New York-Northern New Jersey-Long Island, NY-NJ-PA	18897109	1	2078681.99	1417283.18
Los Angeles-Long Beach-Santa Ana, CA	12828837	2	1411172.07	962162.775
Chicago-Joliet- Naperville, IL-IN-WI	9461105	3	1040721.55	709582.875
Dallas-Fort Worth- Arlington, TX	6371773	4	700895.03	477882.975
Philadelphia- Camden-Wilmington, PA-NJ-DE-MD	5965343	5	656187.73	447400.725
Houston-Sugar Land- Baytown, TX	5946800	6	654148	446010
Washington- Arlington-Alexandria, DC-VA-MD-WV	5582170	7	614038.7	418662.75
Miami-Fort Lauderdale-Pompano Beach, FL	5564635	8	612109.85	417347.625
Atlanta-Sandy Springs-Marietta, GA	5268860	9	579574.6	395164.5
...
# URBAN STREELIGHTS IN CITIES > 100,000P			25461457.00	17360084.00

APPENDIX: CITIES AND STREETLAMPS

Total Market size	
Total number of cities	250
Estimation of total number of lamps	21,000,000
Average number of lamps per city	84,000
Target number of cities for the current instrument	36

APPENDIX: EMC ASSUMPTIONS

Negotiation Costs

- ✓ We hire 10 individuals to acquire EMC contracts for 1 year
- ✓ They are paid a base salary + commission of \$1 per streetlight
- ✓ Each will be assigned a region of the country and will manage roughly 20 city areas

APPENDIX: INSTALLATION ASSUMPTIONS

- ✓ We outsource the installation of LED lights
- ✓ It is estimated that a team of 2 persons can install 50 LED lights per day
- ✓ With 100 teams: 1,250,000 lights can be installed in one year
(Assuming 250 working days)

APPENDIX: SENSITIVITY ANALYSIS

Sensitivity Analysis

	Worst	Base	Best	Assumptions
Share of energy savings	22.95%	34.63%	49.11%	40%/50%/60%
SPE return	32.49%	34.63%	36.86%	7%/6%/5%
Electricity incr.	28.14%	34.64%	41.20%	-1% /1%/ 3%
Perfect storm	12.65%			
Base Case	34.63%			
Miracle Conditions	56%			

APPENDIX: CARBON MARKET

Two types of carbon credit:

The carbon market can be divided into two: the voluntary market and the regulatory (compliance) market.

In the compliance market, carbon credits are generated by projects that operate under one of the United Nations Framework Convention on Climate Change (UNFCCC) approved mechanisms such as the Clean Development Mechanism (CDM). Credits generated under this mechanism are known as Certified Emissions Reductions (CERs).

In the voluntary market, carbon credits are generated by projects that are accredited to independent international standards such as the Verified Carbon Standard (VCS).

These credits are known as Verified Emission Reductions (VERs). Carbon Trade Exchange supports the trading of both voluntary and compliance credits.

Resource: <http://carbontradexchange.com/knowledge/what-is-carbon-credit-dexchange.com>

APPENDIX: CARBON MARKET

Four steps to start trading carbon credit:

Step 1: Choose Credit Type---VER (Verified Emission Reduction)or CER (Certified Emission Reduction)

Step 2: Register carbon unit

Average price of VER: \$4.8277/ton in North America (2013)

Step 3: Choose method to trade Carbon Credit

Two methods: OTC and Exchange

Step 4: Apply for membership with emission trading exchange

<http://www.ieta.org/emissions-trading>

<http://carbontradexchange.com>

APPENDIX: ENVIRONMENTAL IMPACT

United States:

Note: Collectively the group of **industrialized countries** committed to a Kyoto target, i.e., the Annex I countries excluding the USA, have a target of reducing their GHG emissions by **4.2% on average** for the period 2008-2012 relative to the base year, which in most cases is **1990**

Initiatives like the Illumina venture funds would have helped the country with more than 12% of its target reduction

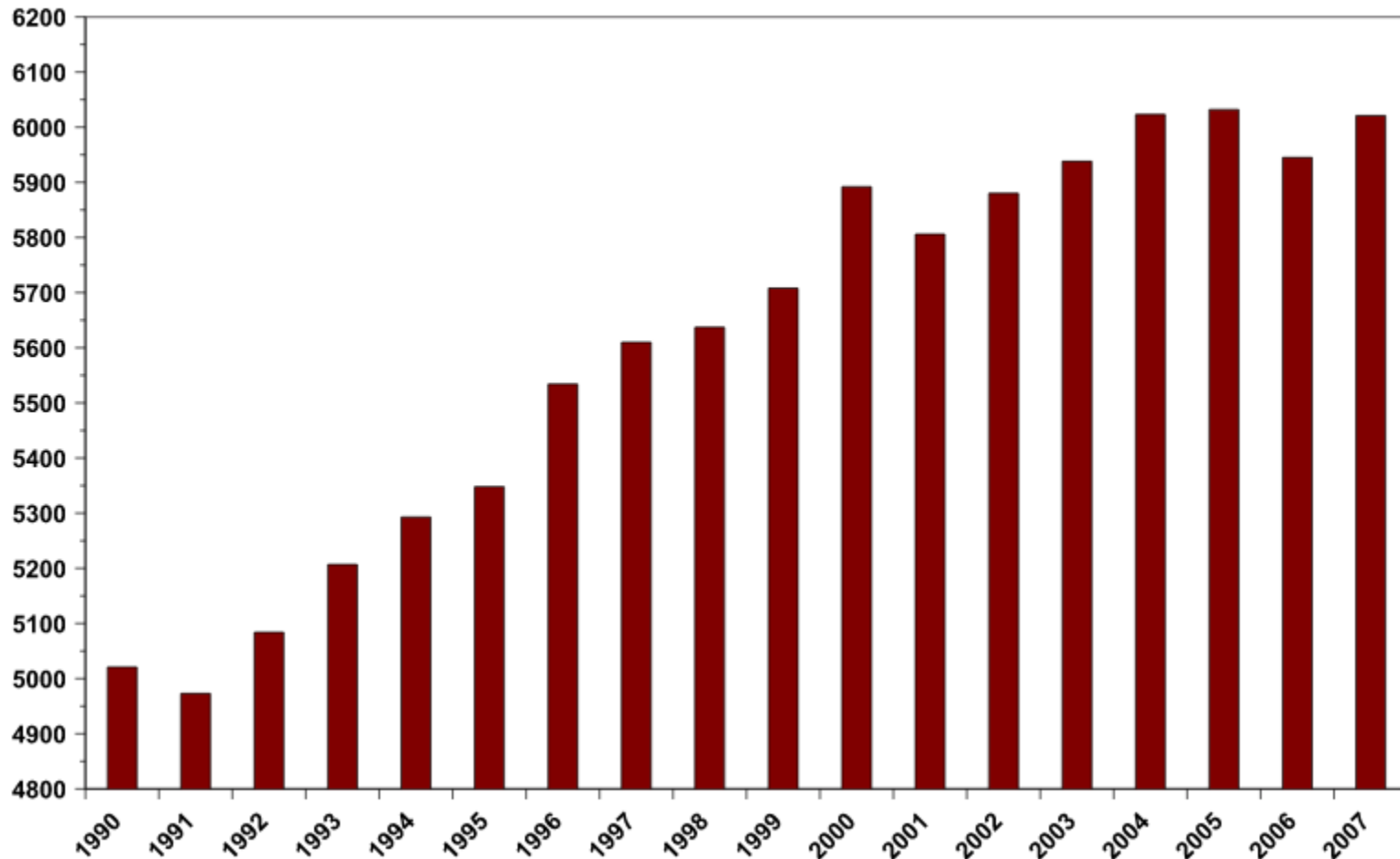
If under Kyoto	
US Emission (1990)	5,030.00
Illumina CO2 reduction	3.75
Estimated yearly target reduction	4.20%
Emission reduction using full market size	26.042
Percentage of reduction goal	12.33%

APPENDIX: ENVIRONMENTAL IMPACT

U.S. Carbon Dioxide Emissions from Energy and Industry, 1990-2007

Energy Information Administration

■ Million Metric Tons Carbon Dioxide



APPENDIX: CURRENT ENVIRONMENTAL INITIATIVES






Existing willingness in the United States is reflected by:

- ✓ The [Regional Greenhouse Gas Initiative](#) (RGGI), which started in 2009. This scheme caps emissions from power generation in ten north-eastern U.S. states (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont).
- ✓ Emissions trading in California

APPENDIX: SCALABILITY

We are targeting the two countries with the highest rate of CO₂ emissions:

- 1) Expanding in the United States after a successful pilot project
- 2) Entering the China market

Country	CO ₂ emissions ^[9]	Emission per capita ^[9]
<i>World</i>	34,500,000	4.9
 China	9,860,000	7.1
 United States	5,190,000	16.4
 India	1,970,000	1.6
 Russia	1,770,000	12.4
 Japan	1,320,000	10.4

APPENDIX: HOW TO REACH MUNICIPALITIES

The US Department of Energy Municipal Solid-State Street Lighting Consortium:

- ✓ Serves as a body of knowledge for the LED sector
- ✓ 360 US municipalities are currently members
- ✓ Registration is free but sponsorship is needed from a current member or governmental entity
- ✓ Offers opportunities for product demonstration and is a sales channel for LED infrastructure products

Resource: <http://www1.eere.energy.gov/buildings/ssl/index.html>

APPENDIX: BIDDING PROCESS

For each product submitted for consideration, the following should be provide:

- ✓ Certification that the proposed product meets ARRA Buy American requirements
- ✓ Original (i.e., unaltered) LM-79 photometric reports from a qualified testing laboratory, including measured CCT and BUG rating.
- ✓ Explanation of how the estimate of product lifetime was derived.
- ✓ Documentation detailing the effects of ambient temperature on light output, power consumption, and rated lifetime.
- ✓ Documentation indicating ingress protection (IP) rating for the optical system enclosure, as determined by an OSHA Nationally Recognized Testing Laboratory per ANSI/IEC 60529-2004.

An applicable warranty statement clearly detailing items covered and items not covered.