Financing Energy Access

Sustainable Energy Access for All Africans by 2030

Second Annual Conference on Climate Change and Development in Africa

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Sizing Energy Access & its Financial needs

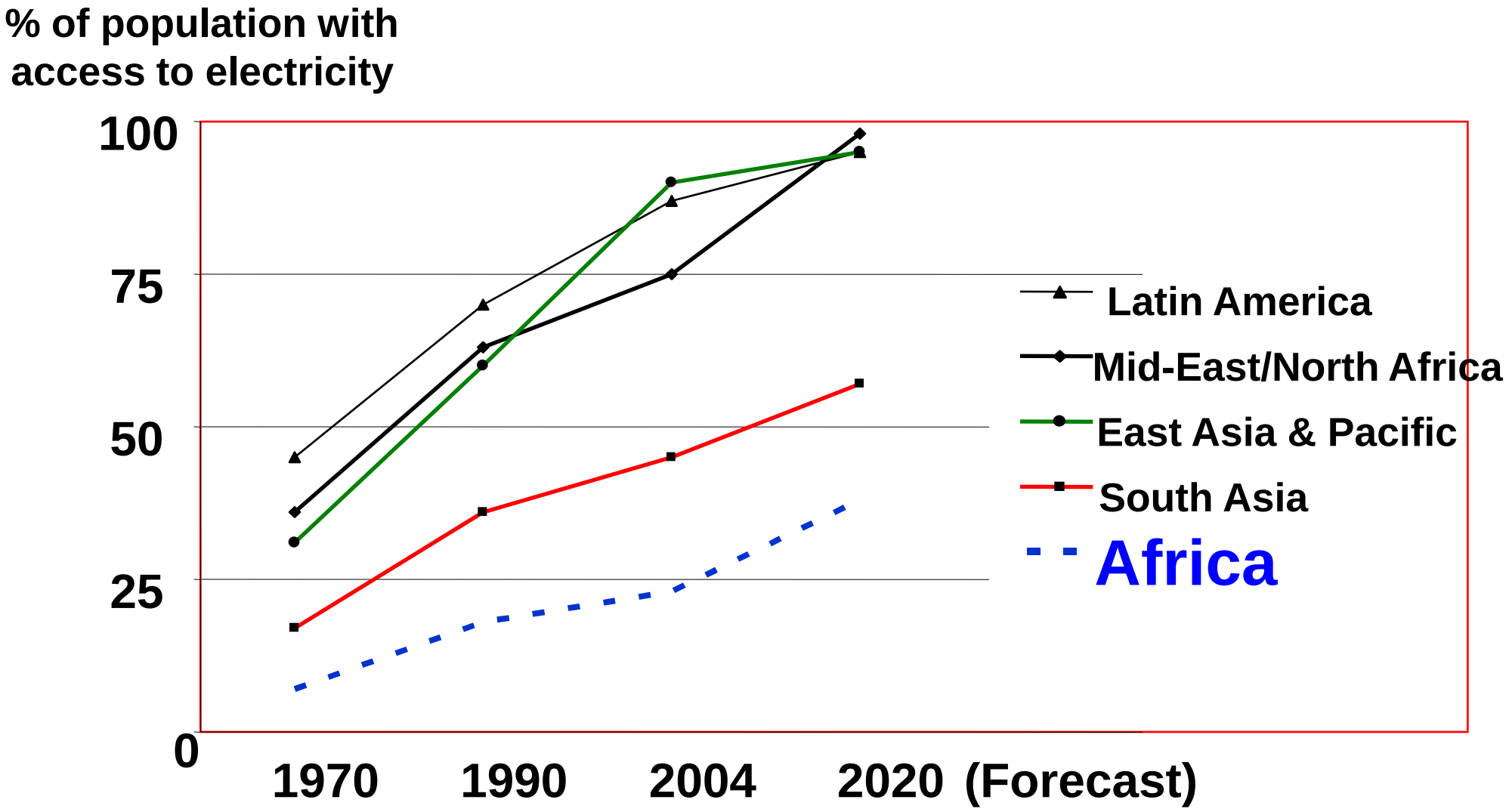
In 2009:

- **585 Million Africans without electricity**

- **$US 9.1 Billion spent for access to modern energy services**

Source: IEA & UNDP

Electricity access overview in the world



585 million in sub-Saharan Africa lack access to electricity

Connection rates as low as 8% in rural areas

•Source: Figures from IEA, 2010 & Forecast by the WB, 2006

Sizing Energy Access & its Financial needs

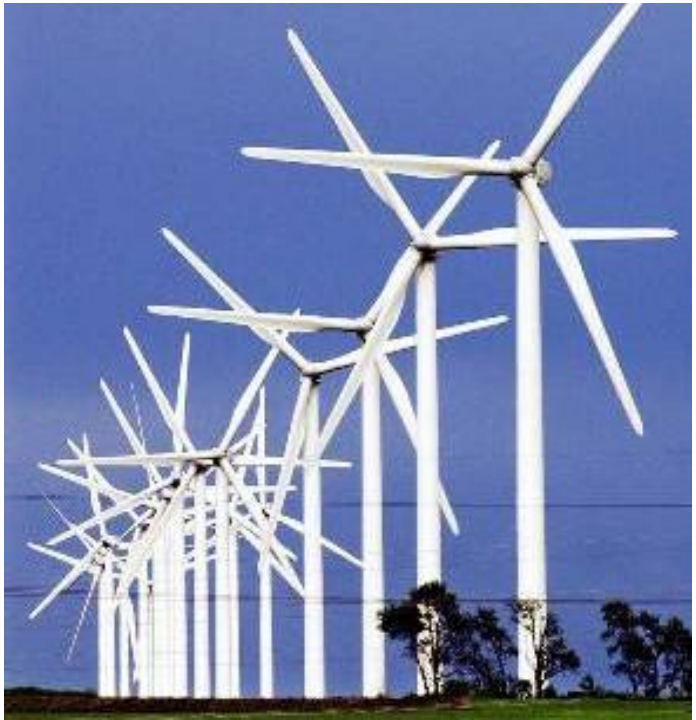
Under BAU, in 2030

- **645 Million Africans with electricity but**
- **1 Billion poor without it**

To meet Universal Access to Energy in 2030:

$US 48 Billion/year needed (3% of global energy expenditure)

Source: IEA & UNDP



UNDP Multifunctionnal Platforms

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Financing off-grid sustainable energy access for the poor

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ABSTRACT

This paper examines the role of public instruments in promo
sustainable energy access. Renewable energy technologies a
solutions for off-grid energy access. The dramatic uptake of

* See 2010 Donor Statement as an example of this increased emphasis: http://www.enterprise-development.org/download.aspx?id=1645

of annual SIDS evaluations on project, programme and policy and portfolio level, including for decentralized renewable energy access.

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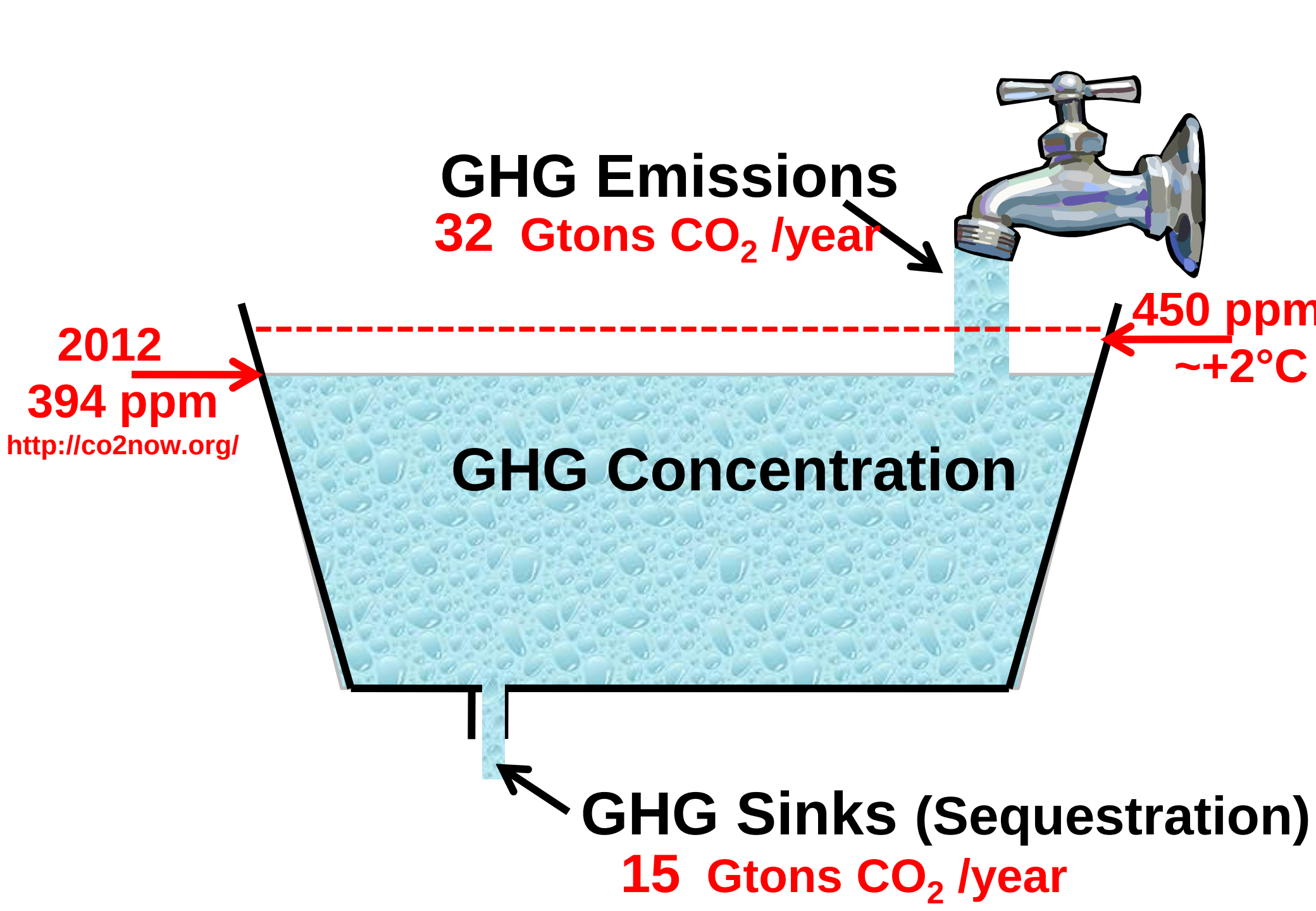
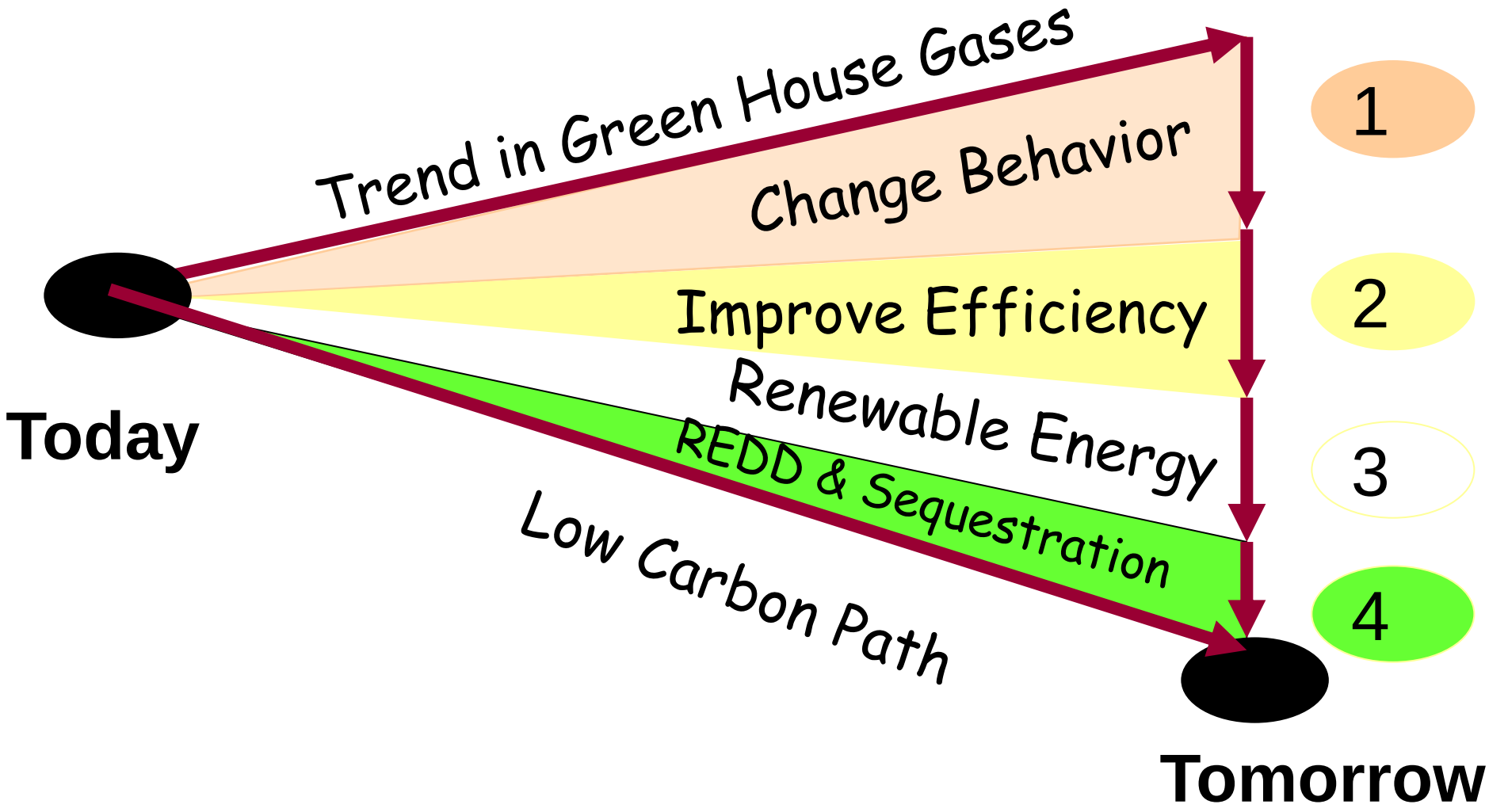

GHG Emissions
32 Gtons CO_2 /year
2012
394 ppm
http://co2now.org/
450 ppm
~+2°C
GHG Concentration
GHG Sinks (Sequestration)
15 Gtons CO_2 /year


Trend in Green House Gases
Change Behavior
Improve Efficiency
Renewable Energy
REDD & Sequestration
Low Carbon Path
1
2
3
4
Today
Tomorrow

Short lessons learned from the mobile technology

In 2011, 5.9 Billion mobile users worldwide

Reasons for sharp uptake, including in developing world:

- **Standard technology**
- **Low-cost handsets**
- **Pre-paid platform**
- **Liberalization of telecoms market through a sound regulatory environment**

Four possible conditions to lower cost for financing energy access

- Reduce balance of system
- Eliminate taxes & tariffs on clean energy services
- Reduce subsidies of fossil fuels
- Promote entrepreneurship & income-generating activities

Encouraging productive use pays

In Nepal, direct benefits of electricity :

-$150/year of revenue per electrified household

-$912/year of revenue per electrified household with productive activities

Understanding the Stakeholders & their barriers

4 Stakeholders:	Consumers/ Users	Policy Makers	Local Financers	Supply chain & Infrastructure

Understanding the Stakeholders & their barriers

The Barriers are Lack of:	Consumers/ Users	Policy Makers	Local Financers	Supply chain & Infrastructure
Affordability	X	X		X
Access	X			X
Expertise	X	X	X	X
Motivation	X	X		X
Awareness	X	X	X	X
Business Model			X	X
Cost Effectiveness	X		X	X

Increasing access to finance to the poor

Upfront cost to modern energy will remain high for the poorest energy consumers

Raising funds for Energy Access

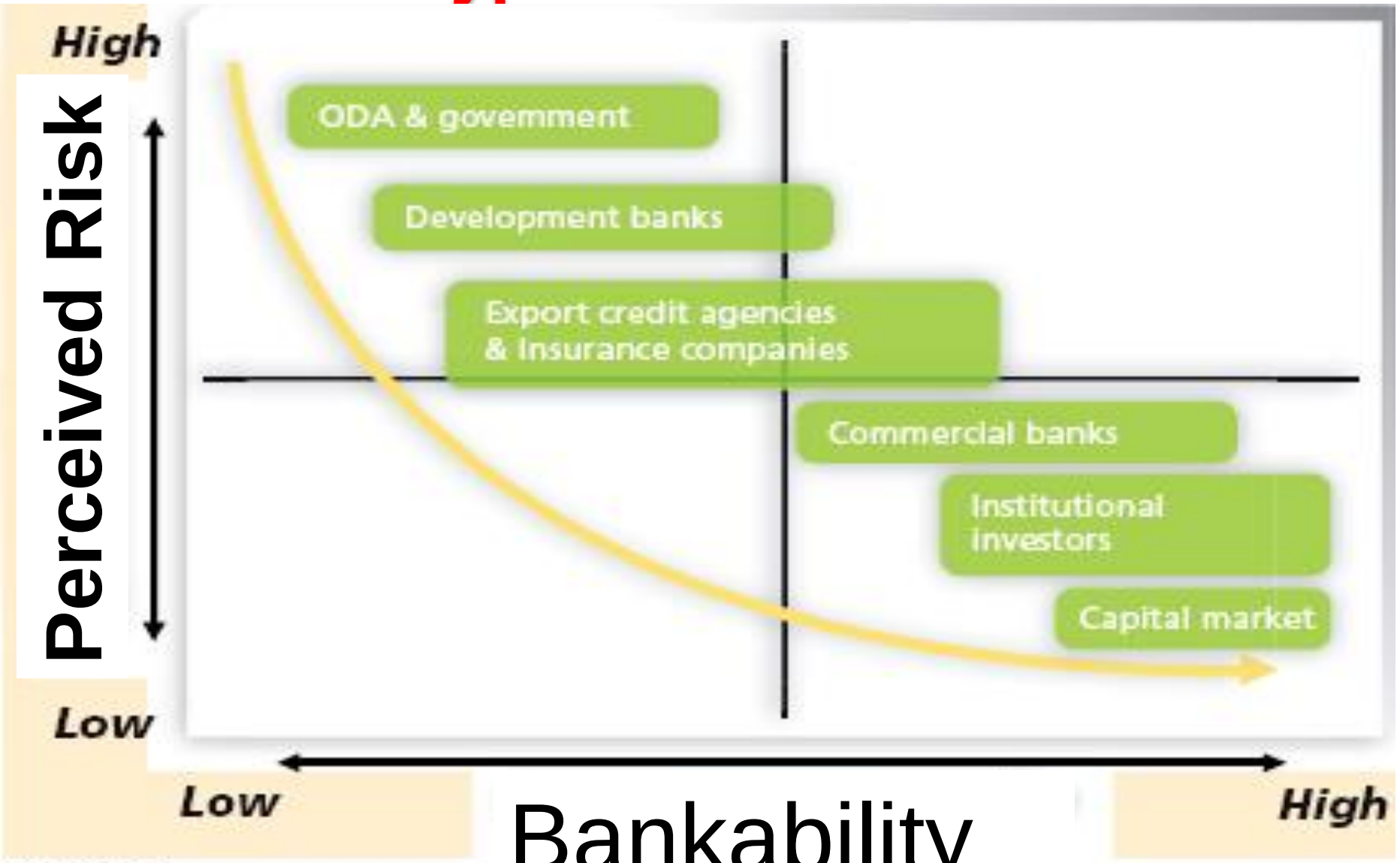
Role of public finance:

IEA estimates that to provide the

$48 B for universal access:

- **$18 B to come from multilateral & bilateral development sources**
- **$15 B from domestic budget**
- **$15 B from the private sector**

Strategic Financing Position of different types of financers



Increasing access to finance to the poor

Five principle models exist to provide upfront cost:

1. **Dealer/supplier credit-based sales**
2. **Consumer credit through commercial banks**
3. **Consumer credit through Micro-Finance Instit.**
4. **Fee-for-service model (equipment=property of service providers)**
5. **Public sector-operated revolving fund credit scheme**

Raising funds for Energy Access

Possible additional sources of public finance

Raising funds for Energy Access
1. International Public Finance for development & climate change

- **$15 B in 1980**
- **$7 B in late 1990s**
- **$9.1 B in 2009**

1. **Prioritize Energy in development agenda & development assistance**
2. **GEF, GCF, Cancun $100 B pledge: tbc: NAMA, SE4E, Energy +**

Raising funds for Energy Access

2. Domestic Budget Contribution

- **Phase out subsidies on fossil energy**

  In 2009, Global Subsidies on Fossil Energy : $312 B

  Clean Energy : $57 M

- **Cross subsidies between on-grid & off-grid**

- **Levy on fossil fuel**

Raising funds for Energy Access

3. Carbon Finance

Improved cookstoves: up to 1 ton/yr avoided GHG

CDM : Programme of Activities

Supported NAMAs: National Appropriate Mitigation Actions

Removing non-economic barriers

1. **Clear policy statement & targets**
   (embed in national development strategy, grid extension)
2. **Consumer education & community participation**
3. **Standardization of equipment**
4. **Research & Development**

Financing Energy Access: Opportunities from CC

- **Contribute to CC Mitigation (through NAMA)**
- **Clean Energy for CC Adaptation**
- **Success of Mobile : engage on-grid RE**

UNDP Flagships Programmes

Clean Start initiative: a joint UNDP-UNDCF

Feed in Tariff for on grid Renewable Energy

www.MDGCarbonFacility.org

Sustainable Energy for All (Gap Analysis)

UNDP

Empowered lives.
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UNCDF
Microfinance • Capital Development

CLEANSTART

MICROFINANCE OPPORTUNITIES FOR A CLEAN ENERGY FUTURE

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