



**USAID**  
FROM THE AMERICAN PEOPLE

# Public-Private Participation in Infrastructure

---

Presented at the Infrastructure PPP Conference  
Ain Sokhna, Egypt – May 2008

---

**Allen Eisendrath, Energy Team Leader  
Office of Infrastructure & Engineering  
US Agency for International Development**

# Outline

- Definition of PPP
- Advantages & Disadvantages
- Proof that PPP is Effective
- Factors that Lead to PPP Success
- PPP & Reforms
- PPP Trends

## DEFINITION OF PPP

- A public-private partnership is a long-term contract signed by a public agency and a private party for the construction, rehabilitation, operation and/or maintenance of an infrastructure network.
- With PPP, the private sector delivers capital, technology, and/or operational effort
- PPPs give private operators incentives to improve the performance of the public infrastructure assets

# Continuum between Totally Public and Totally Private

Outsourcing of Functions by SOEs	PPP			
	Outsourcing contracts for bill collecting, maintenance, etc.	Management contracts	Leases	Concessions & BOT
Only works when the corporate governance, management and business model of the SOE is sound	Introduce discipline; private firm runs company; similar to receivership; managers should have full control	Private firm operates & maintains; investment funded by public sector	Private firm operates & maintains; investment by private firm	

- Contractualization of performance obligations, leading to better quality and efficiency
- Better value over the entire project life cycle
- Access to capital markets
- Accelerate public investment programs
- Transfer risks to private operator
- Introduce improved management practices and technologies

## DISADVANTAGES

- Expensive project development costs
- Risk of failure if poorly designed and regulated
- Require that capital costs are recovered (also an advantage)
- Provide opportunities for corruption (not different from public sector projects)

FT May 13, 2008



# MINISTRY OF ECONOMY TRADE AND ENERGY, REPUBLIC OF ALBANIA

## PUBLIC SECTOR PARTICIPATION IN THE DISTRIBUTION BUSINESS OF KESH

### INVITATION FOR PREQUALIFICATION APPLICATIONS

The Ministry of Economy, Trade and Energy (METE) of the Republic of Albania, hereby invites prequalification applications from prospective bidders for the privatization of the Distribution System Operator (the Project). A majority of Distribution System Operator's share capital will be offered to a strategic investor.

**In Albania, the government is privatizing electricity distribution**

Prospective Bidders that are interested in participating in the Project as set forth in the prequalification document shall be invited to participate in an international competitive bidding for the Project. Prequalification Applications must be submitted by 12:00 local time on the 2nd of June 2008, at the address: METE, P.O. Box 100, Tirana, Albania. Any request for additional information and/or questions concerning the Prequalification Document may be submitted in writing to METE with a copy to IFC at the addresses given below.

A copy of the Prequalification Document may be either collected from the offices of METE at the address noted below or downloaded from [www.albanakesh.org](http://www.albanakesh.org). Please confirm physical receipt or successful downloading of this invitation by email to the address noted below.

## India's Airport PPP Program

- IATA rates airports on a 1- 5 scale. Changi Singapore and Zurich get about 4; India's best gets 2.6. Plan is to bring Mumbai up to at least 3.5.
- Strategy:
  - Modernization of major airports thru PPP
  - Greenfield development of PPP airports
  - Cityside development packages thru PPP
  - JVs for the largest airports
  - Modernization of cargo, baggage, flight service and ATC thru PPP
- Raise \$10 billion through PPP

# New Zealand's experiment in rail privatisation comes to a halt

## TRAVEL & LEISURE

By Peter Smith in Sydney

The New Zealand government has bought back the country's main rail and ferry operating business from Australia's Toll Holdings for NZ\$856m (US\$522m) after the two sides failed to settle a long-running funding dispute on upgrading the rail network.

The deal puts an end to an experiment in rail privatisation begun in 1988 with the sale of the network to US railway company Wisconsin Central and a consortium of New Zealand investors for NZ\$120m.

Michael Cullen, the Labour finance minister, said the privatisation "and the running down of the asset has been a painful lesson for New Zealand".

Paul Liddle, Toll's managing director, said the group had not planned on selling its rail operating business

back to the government. But he said proceeds from the sale would help it pursue transport infrastructure projects.

**PPP Doesn't always work, but reasonable arrangements for change can be made**

It comes less than a month after an attempt by the Canada Pension Plan Investment Board to buy a stake in the country's largest utility was blocked by the government. The deal would result in a work government indicated it was prepared to block. The deal was the result of the government's willingness to return the network to public ownership. The government's repurchase of the rail assets completes New Zealand's second

large-scale re-nationalisation in recent years.

This signifies a sharp reversal of the mass privatisation policies for which it became internationally known in the 1980s and early 1990s.

In late 2001, it agreed to bail out Air New Zealand, the national carrier, to prevent it from going bankrupt, injecting NZ\$890m in return for an 80 per cent stake.

Rail privatisation was never popular in New Zealand and Trans Rail, the company set up to run the system, ran into financial and political difficulty after its owners stripped it of capital and under-invested in the railway system.

Toll bought a majority stake in Trans Rail in 2003. It sold the track network back to the government in 2004 for a nominal sum of NZ\$1, but continued to operate train services.



Toll bought a majority stake in Trans Rail in 2003. Bloomberg

See Lex

## European Commission Resource Book on PPP Case Studies

Many examples;  
most are  
successful;  
lessons are also  
clear

<b>Background &amp; Methodology</b> .....	10
<b>Water and Waste Water Treatment Sector Analysis</b> .....	15
Case 1 Apa Nova in Romania.....	21
Case 2 Scottish Water Solutions, UK.....	24
Case 3 Scottish PPP Water Projects, UK.....	27
Case 4 BerlinWasser, Germany.....	30
Case 5 Constanta Water and Wastewater Project, Romania.....	33
Case 6 Dublin Region Waste Water Scheme, Ireland.....	36
Case 7 Karvina Sewerage, Czech Republic.....	39
Case 8 Trencin Water System, Slovak Republic.....	42
Case 9 Dwr Cymru, Welsh Water Not for Profit Model, UK.....	46
Case 10 Stadtentwässerung Schwerte GmbH, Germany.....	50
<b>Solid Waste Management Sector Analysis</b> .....	54
Case 11 ASA and Rethmann, Hungary.....	61
Case 12 RWE Entsorgung, Bulgaria.....	66
Case 13 Nessebar “Golden Bug” Landfill, Bulgaria.....	71
Case 14 Kirklees Metropolitan Solid Waste Project, UK.....	74
Case 15 Prescom in Targoviste, Romania.....	77
Case 16 The Jegunovce Concession, Macedonia.....	80
Case 17 Mülheimer Entsorgungsgesellschaft mbH, Germany.....	83
<b>Transport Infrastructure Sector Analysis</b> .....	87
Case 18 M1-M15 Motorway, Hungary.....	93
Case 19 M5 Tolled Motorway, Hungary.....	96
Case 20 Beiras Litoral and Alta Shadow Toll Road, Portugal.....	100
Case 21 International Airport Hamburg AG, Germany.....	104
Case 22 Local Airport Kassel-Calden, Germany.....	107
Case 23 International Airport Warsaw, Poland.....	110
Case 24 Wijkertunnel Randstad, The Netherlands.....	113
Case 25 Perpignan – Figueras Rail Concession, France & Spain.....	116
Case 26 Channel Tunnel Rail Link (CTRL), UK.....	119

- Water & transport have highest capital cost; solid waste lowest
- Water & transport have longest contract periods; this reflects time needed to **recover investment**
- Infrastructure operation vs. infrastructure development
- Each sector has its own norms for allocation of **demand risk**. Solid waste has highest allocation. Some demand risk sharing is common in other sectors.
- **Concessions and JVs** were most common types of contracts.

- Risk transfer is the heart of PPP. Ineffective risk transfer results in project failures & inefficiency
- Transfer risk to the party best able to bear the risk. Each project must have its own risk analysis & allocation
- Public authority should start by specifying project objectives. Failure to do this results in poor allocation of risk & responsibilities
- Sustained high level political support is required, particularly for large projects, and for projects that have user charges and/or improved service standards
- Many countries use a formal method to demonstrate that PPP offers better value for money than a public approach

- It is very important to have a good legislative and regulatory environment for a project
- Many examples of failed projects due to faulty demand or cost projections. It is “essential” for both parties to do detailed demand and cost analysis using the planned service standards



**USAID**  
FROM THE AMERICAN PEOPLE

Cases	Joint Venture	Concession	Service Agreement	BOT/DBFO
<i>Apa Nova, Romania</i>		X		
<i>Scottish Water, UK</i>	X			
<i>Scottish PPP, UK</i>				X
<i>BerlinWasser, Germany</i>	X			
<i>Constanta, Romania</i>		X		
<i>Dublin, Ireland</i>				X
<i>Karvina Czech Rep</i>			X	
<i>Trencin, Slovakia</i>			X	
<i>Dwy Cymru UK</i>		X		
<i>Schwerte, Germany</i>	X			

**Key Financial and Contractual Conditions**

Cases	Guaranteed Minimum Revenue	Risk of Contract Termination	Profit Sharing	Sharing of Management Decisions
<i>Apa Nova Romania</i>	Yes	Low	Yes when profit generated	Board includes public and private parties
<i>Scottish Water, UK</i>	No	Low	Only for private party	Board includes public and private parties – strong regulator
<i>Scottish PPP, UK</i>	No	Low	Only for private party	Board includes public and private parties – strong regulator
<i>BerlinWasser Germany</i>	Yes	Low	Only for private party	Board includes public and private parties – majority public party
<i>Constanta Romania</i>	Yes	Low	Yes when profit generated	Board includes public and private parties
<i>Dublin Ireland</i>	Yes	Low	No unforeseen profit	Board includes public and private parties – majority public party
<i>Karvina Czech Rep</i>	Yes	Slight	No	Board includes majority public parties
<i>Trencin Slovakia</i>	Yes	Slight	No	Mostly public

**EC PPP Case Studies Report**

<i>Cases</i>	<i>Guaranteed Minimum Revenue</i>	<i>Risk of Contract Termination</i>	<i>Profit Sharing</i>	<i>Sharing of Management Decisions</i>
<i>M1 M15, Hungary</i>	Initially none	Medium	Yes when profit generated	Board includes public and private parties
<i>M5, Hungary</i>	Yes – standby loan facility	Medium	Yes when profit generated	Board includes public and private parties
<i>Beiras Litoral, Portugal</i>	Government provides shadow toll	Low	None	None
<i>Hamburg, Germany</i>	Yes	Low	Yes	Board includes public and private parties
<i>Warsaw, Poland</i>	Yes	Slight	Yes	Board includes public and private parties
<i>Kassel Calden, Germany</i>	Yes	Low	Yes	Mostly public
<i>Wijkertunnel Holland</i>	Minimum revenue guaranteed	Low	None	Shared
<i>Perpignan, France</i>	None	Low	None	Mostly Private – public oversight
<i>CTRL, UK</i>	Initially none	Slight	None	Shared



**USAID**  
FROM THE AMERICAN PEOPLE

## **Pipes & Wires: UK National Audit Office on Incentive-based regulation, RPI-X**

- Monopoly segments of infrastructure require economic regulation
- UK regulators use incentive-based (RPI-X) regulation
- PPP is the basis for electricity, gas, water & telcom services
- Results of incentive based regulation:
  - Consumers get significantly lower prices and higher quality of services
  - Regulated companies have significantly cut costs and invested in networks
  - Following 2001 review, fixed line telcom prices fell by 13% a year in real terms
  - Electricity transmission charges fell by 1.5% per year in real terms
  - Electricity distribution charges fell by 24% in 2000/01 in real terms, and 25% from 1994 to 1998.
  - Water & sewerage charges fell by 2.1% annually in real terms

# Argentina Ports Success

- In the 1990s, private firms were allowed to invest in and operate ports.
- In Buenos Aires port, 6 berths were let on contract to 5 companies, while Port Authority retained ownership of the facilities.
- Cargo increased by 50% between 1990 and 1995
- Labor productivity increased 275%.
- Argentine ports became cheapest ports in LAC.
- By 1997, Puerto Nuevo became the biggest port in LAC.

- Quality and cost of transport infrastructure has strong impact on a country's volume of trade
- For 168 out of 216 US trading partners, transport cost barriers outweighed tariff barriers
- Competition & trade in infrastructure services may improve the quality and cost effectiveness of these services

PPP is an effective mechanism to encourage investment in transport infrastructure & competition in infrastructure services

- After reforms, \$2 billion in **private investments** in power sector
- Dramatic Increase in **access** to electricity
  - Rural Electrification Program received US\$333 million
  - “Output-based assistance” (OBA) scheme for new connections funded partially by privatization proceeds (\$101 m were deposited at trust fund)
- \$180 million private investment in **renewable energy** (30% geothermal, 70% hydropower)

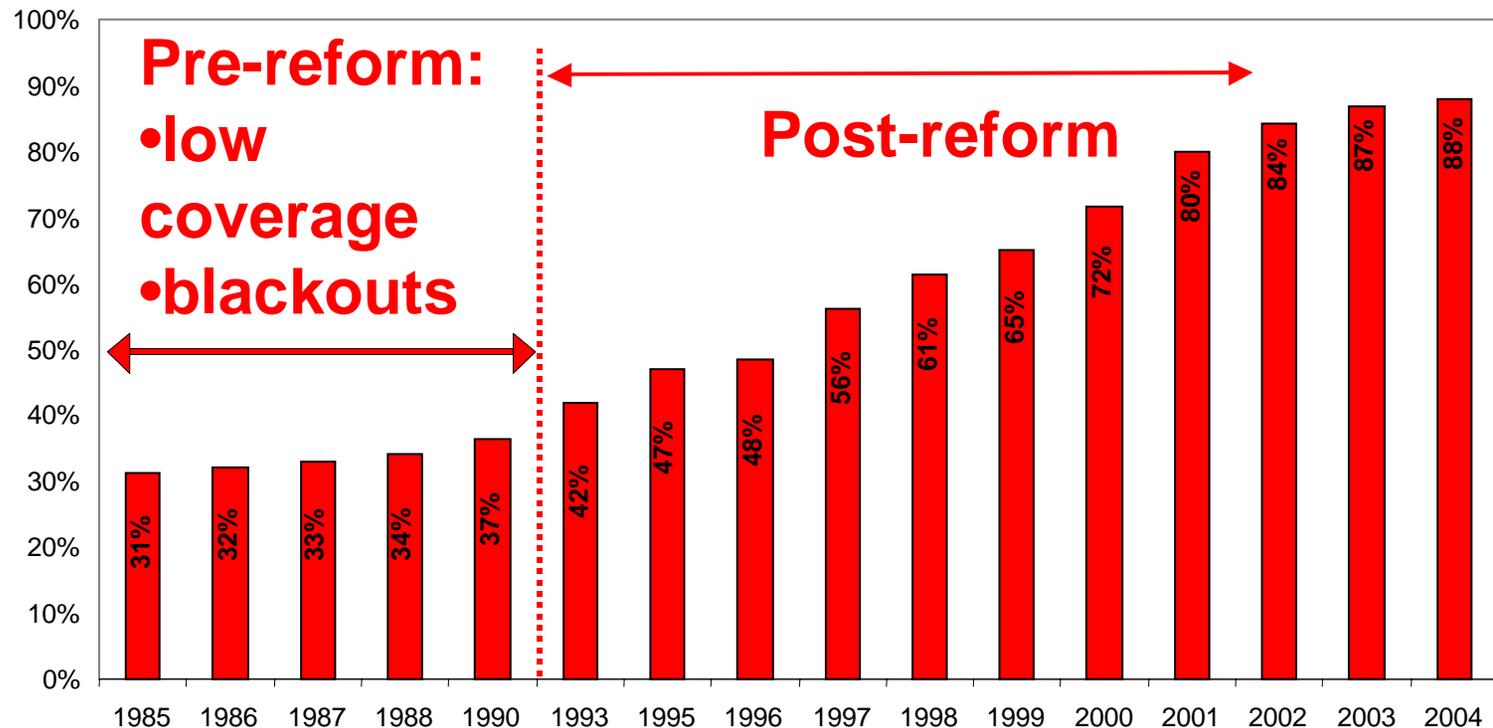


**USAID**  
FROM THE AMERICAN PEOPLE

# Guatemala: A Success Story

## Electricity Coverage

Sources: CEPAL, PA Estimate



**Electrification an element of the Peace Accords**

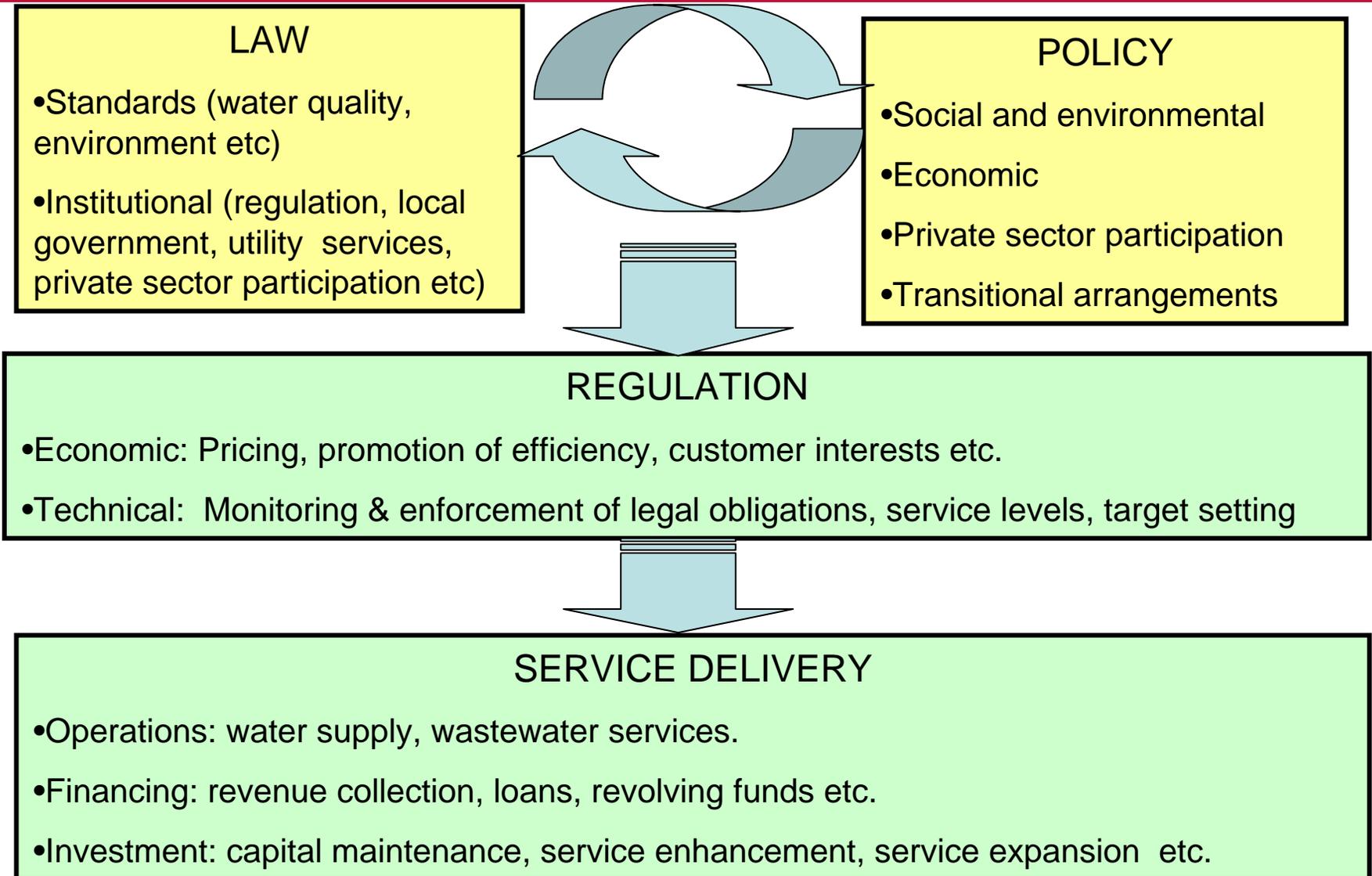
The contract was successful, but heavy outside support from donors was needed to achieve reforms in work practices and procurement

## RESULTS OF THE YEREVAN MANAGEMENT CONTRACT

	2000	2005	Change
Water Produced	431 mil. m3	354 mil. m3	-18%
Gravitational Water Supply	183 mil. m3	212mil. m3	16%
Energy Supply	240 mil. m3	124 mil. m3	48%
Continuity of Service	7.2 hours/day	18.4 hours/day	2.6 times
Collection Efficiency	21%	79%	3.8 times
Customer Metering	2%	91%	45 times

- A credible business case for VALUE and VIABILITY
- Successful PPP often fits into a broader sector reform program:
  - Sector structure
  - Cost reflective pricing
  - Commercialization
  - Autonomy of service providers
  - Competition in competitive segments; regulation in monopoly segments
- Competition in award
- Fair risk allocation
- Contracts that can be adjusted when economic equilibrium changes due to factors outside the operators control
- Need for effective economic regulation

# PPP is Often Part of a Broader Sector Reform



## **JV Approaches are Common**

GMR Hyderabad International Airport Ltd., is a public-private joint venture between GMR Group, Malaysia Airports Holdings Berhad, State Government of Andhra Pradesh & Airports Authority of India (AAI). GMR Group holds 63% of the equity, MAHB 11%, while the Government of Andhra Pradesh and Airports Authority of India each hold 13%.

# Private Participation: Access to the best technologies

Sector	Impact of Technology	Key Technologies
Energy	Major	Renewables are becoming competitive; major innovation in metering & IT; competition in generation if a market is set up
Telecom	Revolutionary	WiFi, WiMax, 3G; banking, connectivity, etc.
Water	Moderate	Major innovation in metering & IT; SCADA & zonal management systems; commercial systems; water and wastewater treatment technologies
Transport	Major	ICT in logistics; GPS; bar codes; RFIDs; video logging; security systems; cargo handling equipment

**Countries that use PPP expect access to the best technologies**

- In World Bank study\* on cost overruns in public sector electricity generation projects, the study reviewed 135 projects in over 30 countries.
- Cost overruns averaged 21% of total estimated project costs
- Time overruns averaged 36% of estimated project schedule
- Compare that to a PPP project, where the winning bidder has a fixed offtake price. If they have cost overruns, they “eat” the additional cost.
- (And think about availability factor too!)

- Widespread adoption of PPP for airports and ports for competitiveness objectives. Economies of scale & access to technology
- Separation of operating and capital investment responsibilities
- Joint ventures are common
- Emergence of local PPP operators
- Electricity & water operating contracts are now used to improve performance of public utilities
- Reform and good regulation are preconditions to many successful PPP programs



**USAID**  
FROM THE AMERICAN PEOPLE

# Questions & Discussion

[aeisendrath@usaid.gov](mailto:aeisendrath@usaid.gov)