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KED Commercialization Project

Summary of the Challenge & Project Design

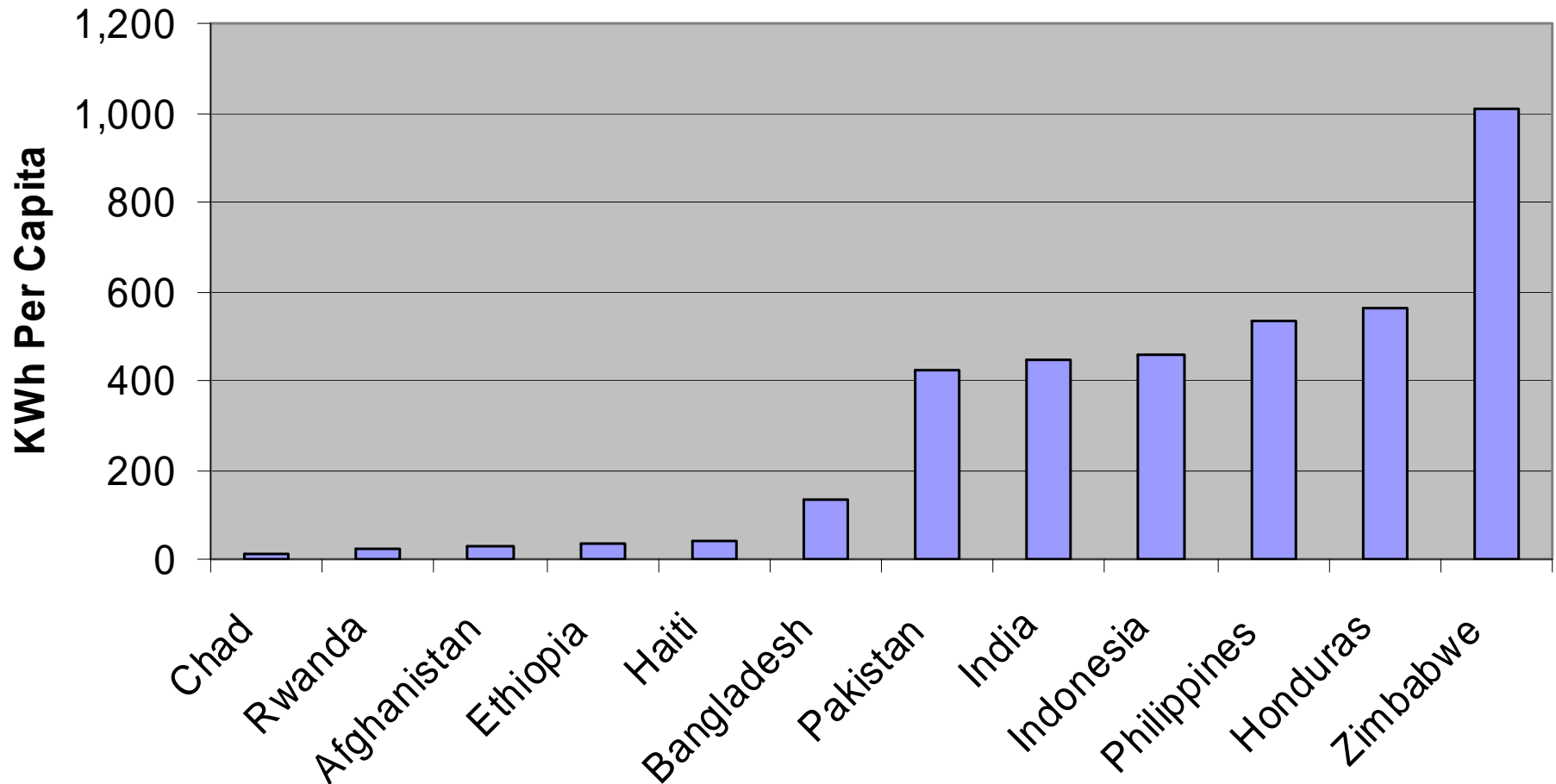
Jerry Bisson

Director, Office of Infrastructure,
Engineering, & Energy

USAID Afghanistan

Electricity Consumption in Afghanistan is Extremely Low

Per Capita Electricity Consumption

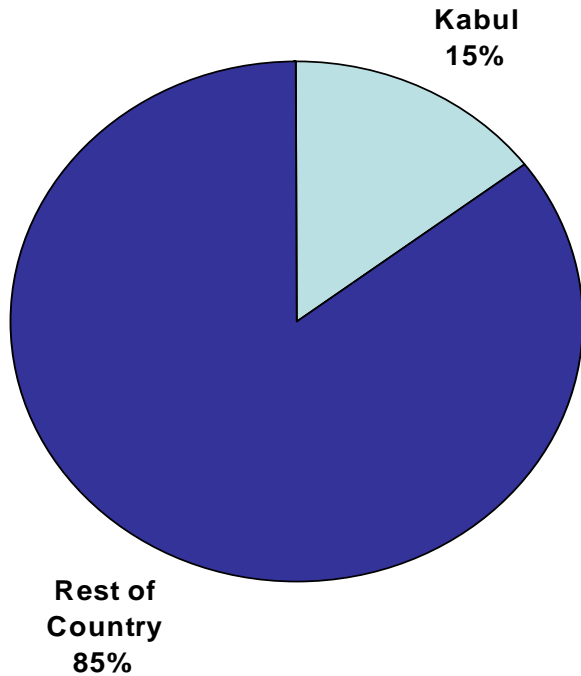


Source: EIA (2005 Data).



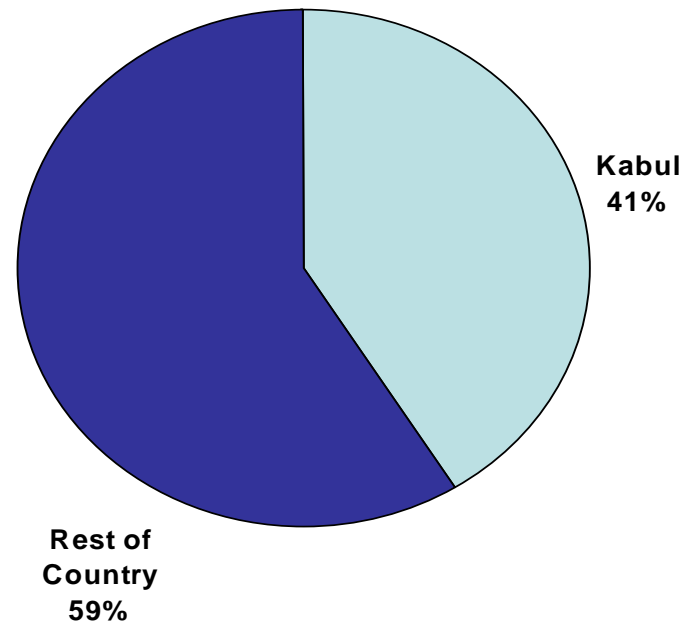
Energy Consumption is Concentrated in Kabul

Population (Million)



Total = 23.0 Million

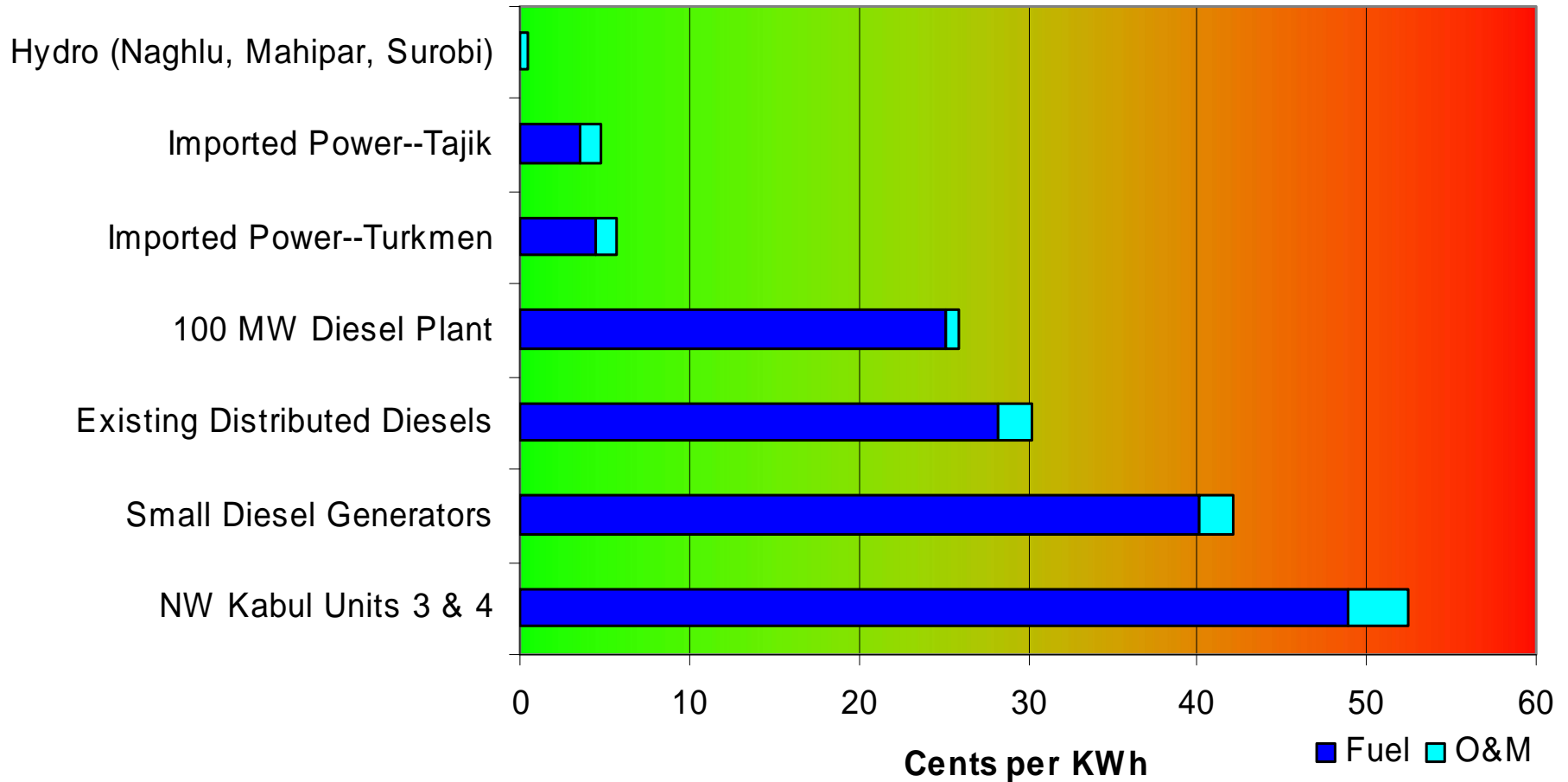
Energy Consumption (MWh)



Total = 1.6 Million MWh

Diesel power is very expensive; Central Asian power and hydro is much cheaper

Cost of Power in Kabul



Based on diesel price of \$1.10 per liter.

Share of Population Connected to Grid



Northeast Power System (NEPS) depends on ability of KED to pay!

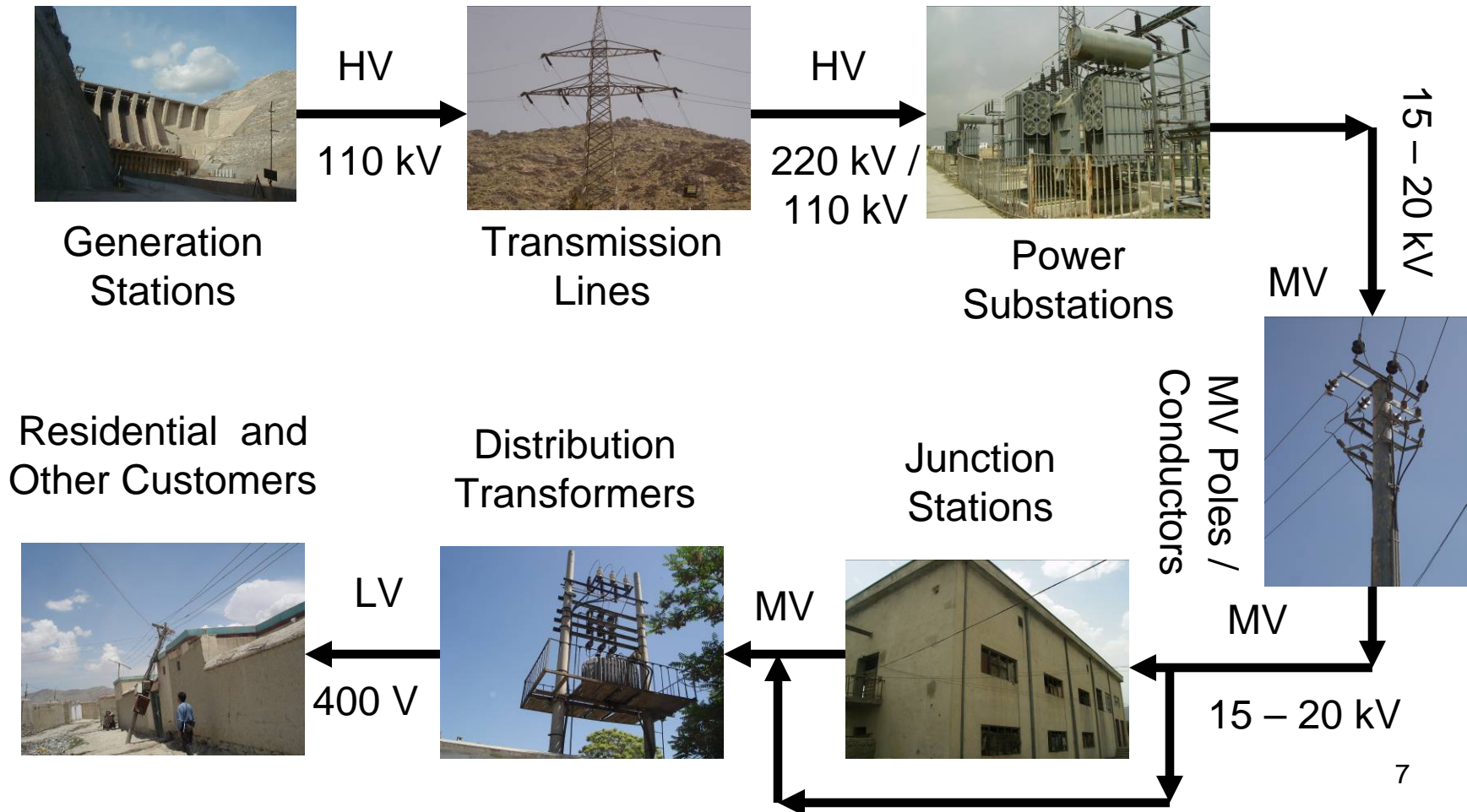
- NEPS will carry power from Central Asia on 220 kV lines
- Potential supply ~900 MW
- Provide power to >12 provinces
- Wholesale cost: 2.5 to 6 cents/kWh
- Completion: June 2009.

HOWEVER:

- Commercial rates needed
- Security concerns

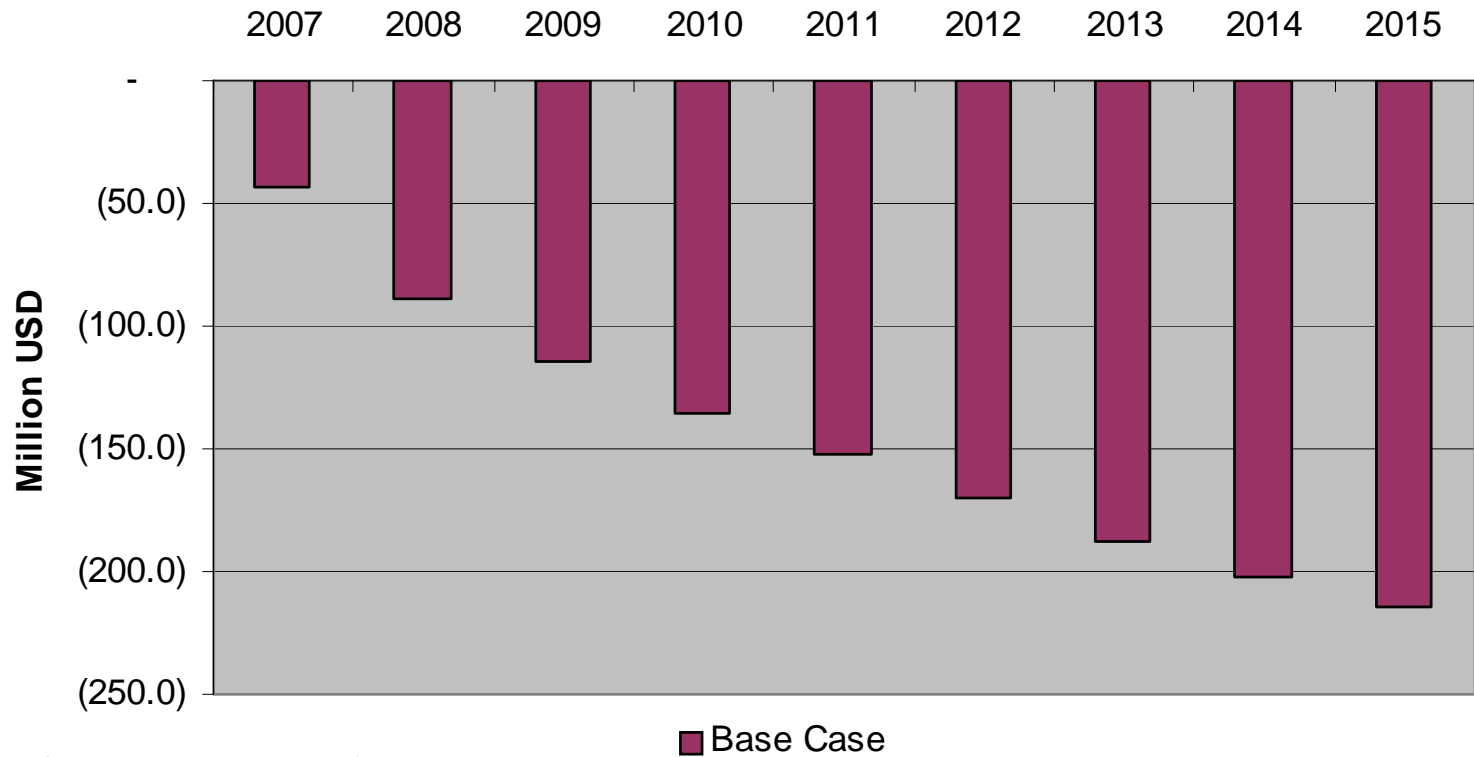


Overview of Kabul Electricity Directorate (KED) System





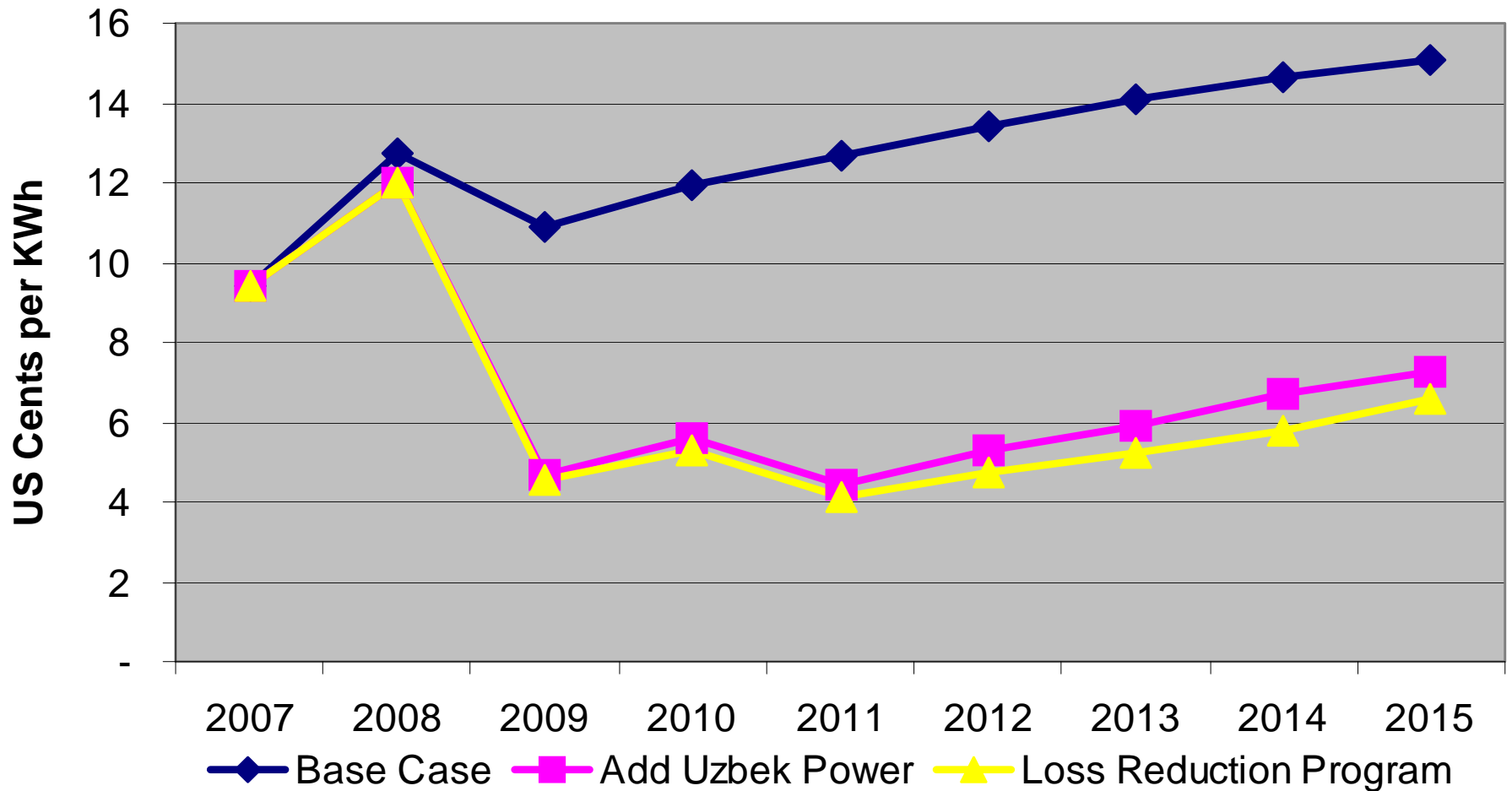
KABUL DIVISION - DABM Gross Profit



ICE Secretariat and AEIC



Unit Cost of Power Produced



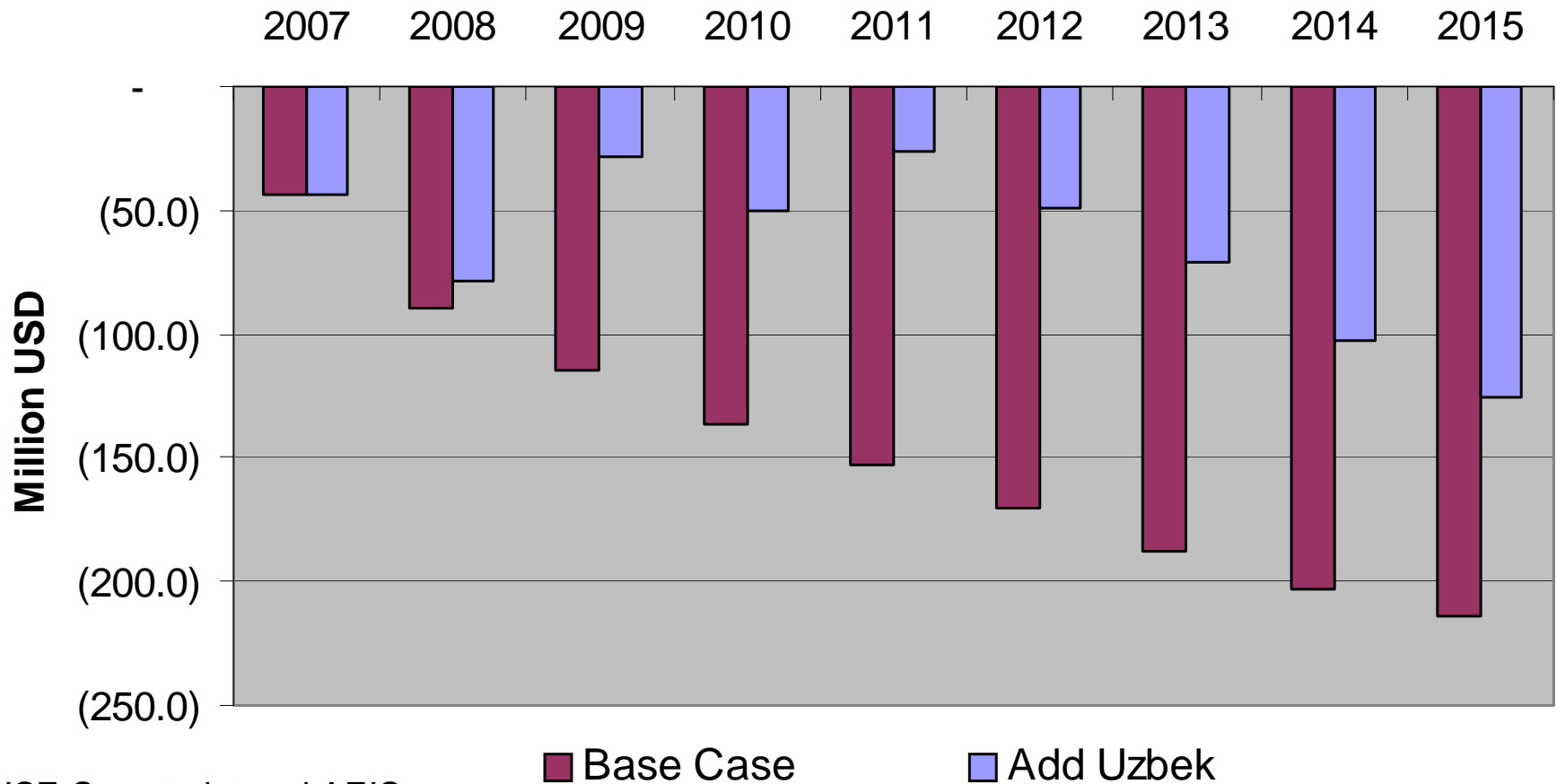


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Central Asian Power Reduces but Does Not Eliminate KED Losses

DABM Gross Profit

If 300 MW of Uzbek Power is Purchased

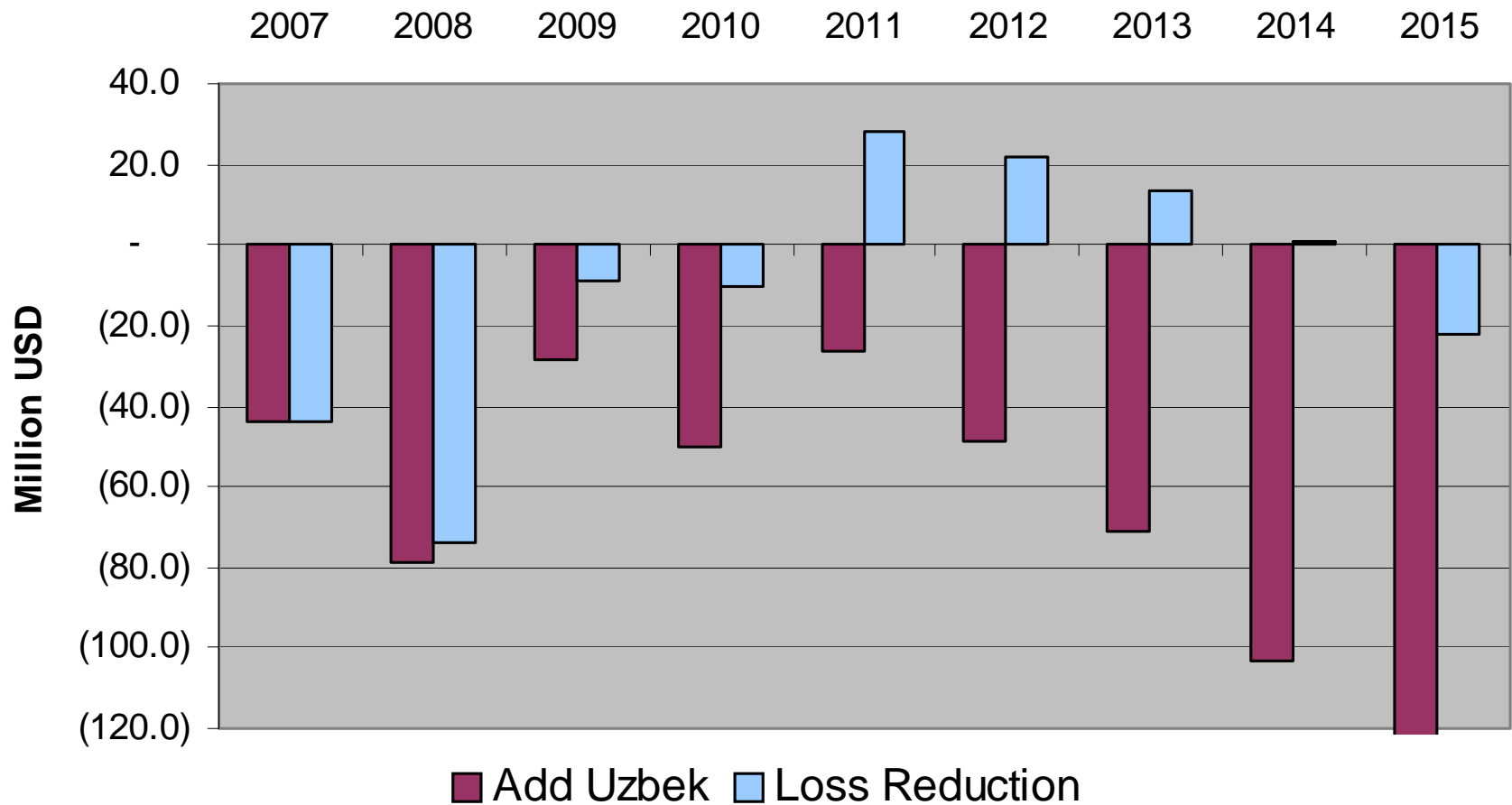




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A "Loss Reduction Program" will Eliminate Losses in Several Years

DABM Gross Profit If A "Loss Reduction Program" is Implemented





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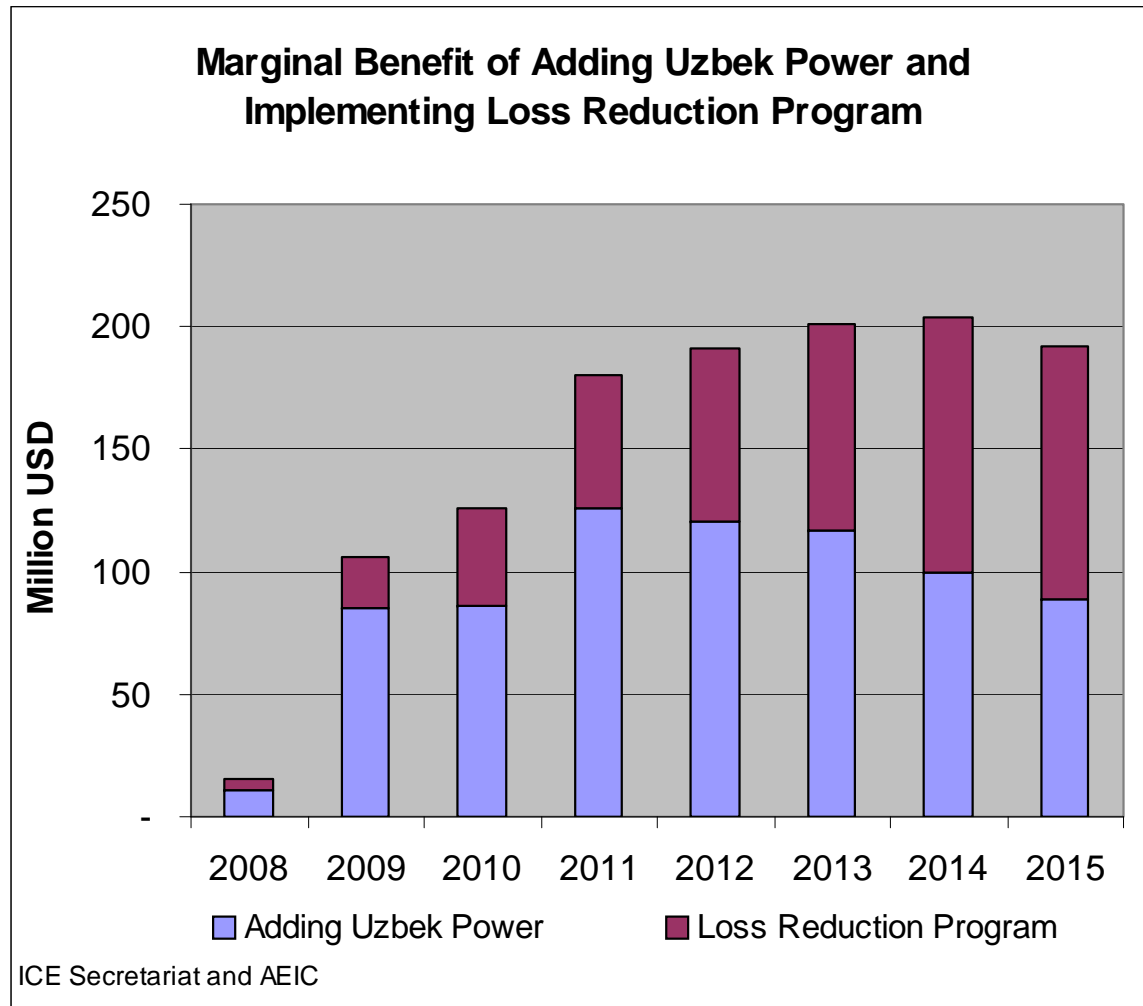
The Last Kilometer: Distribution & Collection Systems Need New Management Approaches

- Distribution and commercial losses estimated at 22%
- Collection rates approximately 50-60%
- Significant revenue “leakage”



Uzbek Power & Loss Reduction Offer Huge Financial Benefits to the System

- Adding Uzbek power reduces KED losses by \$734 million from 2008-2015
- Implementing loss reduction program adds benefit of \$482 million
- Cumulative benefit >\$1.2 billion
- But Uzbek power won't work without loss reduction!





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KED Commercialization Project Summary

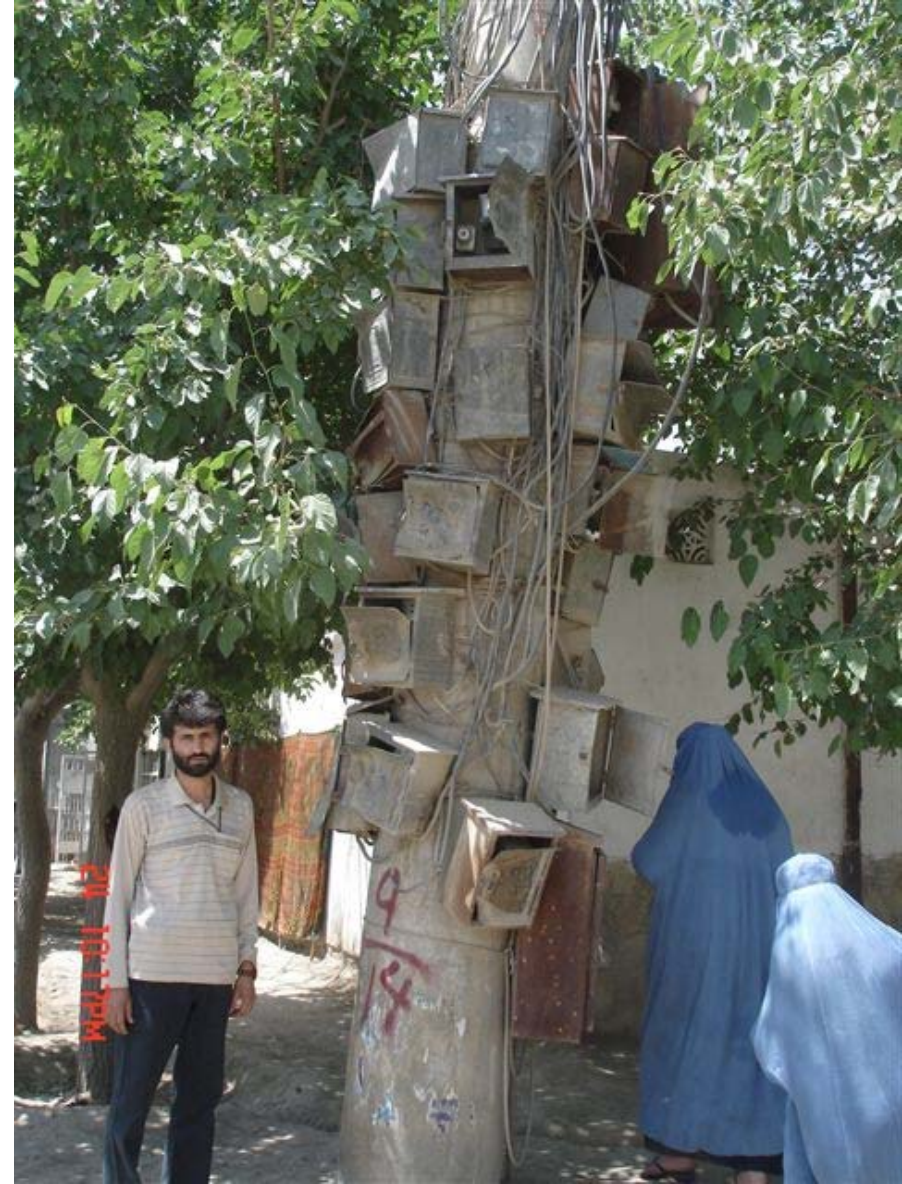




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An Integrated Solution is Needed

- For loss reduction to succeed, DABM needs an integrated solution that addresses technical and commercial operations
- A solution that works in many countries is to contract a distribution system to a qualified private utility operator





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Commercialization Contract for Kabul Electricity Directorate (KED)

Contract Responsibilities:

- Distribution Operations & Maintenance
- Billing & Collection
- Design, installation & management of metering systems
- Staff training & capacity building
- Customer service
- Accounting & finance
- Providing new connections when funds are available





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Objectives of the Commercialization Contract

- Reduce total losses from ~60% to ~25%
- Build capacity of KED staff through on-the-job training & new work practices
- Install key technical & commercial systems
- Maintain rehabilitated distribution areas
- Full cost recovery & better service in the covered areas





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What is the Commercialization Contract?

- 3 year contract between IRoA & USAID Contractor, with 2 year possible extension
- Design – Implement Approach; USAID pays contract costs
- Operator Compensation: Time and Materials
- Large Security Budget
- Additional capital funds for Meters, Bucket Trucks, IT Systems, Tools