

Please note that this presentation was given during the United Nations Climate Change Conference (COP-15) in Copenhagen, December 7-18, 2009 for more information please visit <http://www.cop15.state.gov/>.



**A L L I A N C E T O**  
**SAVE ENERGY**  
*Creating an Energy-Efficient World*

# A “Win-Win” Framework: Energy Efficiency in the Developing World



**Kateri Callahan**

**President, Alliance to Save Energy**

**Friday, December 11**

**DOC and USAID Joint Side Event**



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# Presentation Overview

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- A Few Words about the Alliance
- The Alliance in the Developing World
- Watergy: A Case Study on Effective EE at Work
- A Look at the Potential for the Future

# What is the Alliance to Save Energy?



- ***The Alliance to Save Energy promotes energy efficiency worldwide to achieve a healthier economy, a cleaner environment and greater energy security.***
  - Non-profit organization headquartered in U.S.; operations world-wide
  - Led by **Senator Mark Pryor (D-AR)** and **Jim Rogers, CEO of Duke Energy**
  - Includes 10 Members of Congress – Bi-Cameral; Bi-Partisan
  - Also includes environmental, consumer, and trade associations heads, state and local policy makers, corporate executives



**Senator Mark Pryor (D-Ark.)**

**Jim Rogers, CEO Duke Energy**



**Bi-partisan, Bi-cameral Honorary Vice Chairs**

# What is the Alliance?



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## Business ■ Government ■ Public Interests

- Sponsorship and participation of more than 160 organizations
- Involvement by businesses in all economic sectors
- Initiatives underway in research, policy advocacy, education, technology deployment, and communications



at&t



Washington  
Gas



Tyco Electronics



United Technologies

Johnson  
Controls



WAL★MART®

Exelon®

Andersen CORPORATION



APPA



INNOVATIONS FOR LIVING™



PG&E Corporation.

AGA  
American Gas Association

ALLIANCE  
NEW ENERGY OF UKRAINE



JM  
Johns Manville

american  
lighting  
association

A  
AREVA

American  
Chemistry  
Council





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# The Alliance Around the Globe

## Branch Offices in:

- India
- South Africa
- Mexico
- Ukraine

## Programs & Projects:

- Watergy
- Municipal Network for Energy Efficiency (MUNEE)
- China Energy Efficient Windows Initiatives
- REEEP Compendium of Best RE & EE Practices
- Manual for Financing Municipal EE

# Partners in International Projects



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## ■ U.S. and foreign government, multinationals, foundations, NGOs

- U.S. Agency for International Development,
- U.S. Department of Energy,
- U.S. Department of State,
- Asia-Pacific Economic Cooperation,
- Renewable Energy and Energy Efficiency Partnership,
- International Finance Corporation,
- World Bank, Inter-American Development Bank,
- Coca-Cola and the Coca-Cola Foundation,
- as well as municipalities, water utilities and foreign government agencies.



renewable  
energy  
& energy  
efficiency  
partnership



# A Look at Success:



*WATERGY makes the best use of two valuable, limited resources: water & energy*

## WHY IS THIS IMPORTANT?

- ✓ Every liter of water that passes through a system has a significant **energy cost**.
- ✓ Water sector efficiency leaves more funds for crucial and often underfunded **public services**.
- ✓ In most developing countries, **1/3 to 1/2 of water produced is lost**.

## AND IT'S COST EFFECTIVE...

- ✓ **Rapid Payback:** generally from a few months to 3 years
- ✓ **Huge Savings:** at least 20% in energy costs; much higher possible
- ✓ Makes the most of existing **infrastructure**; reduces the need for new

**RESULTS:** 20.8 million kWh and \$5.3 million (100 cities)





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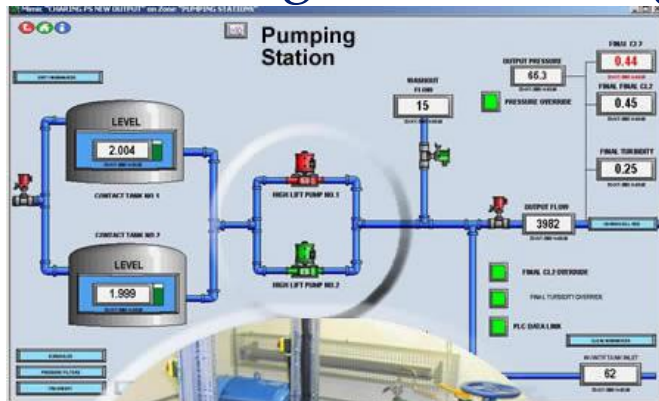
# Cost-Effective Interventions

## 💧 Pumps

💧 Leak Management

💧 Automated Controls

💧 Metering & Monitoring



Diagnostic Solutions, LLC



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# CASE STUDY: EMFULENI, South Africa

## PROBLEM

- **80%** of water flowing to homes **lost** through leaking plumbing fixtures!
- Enough to fill **two** Olympic-size swimming pools **every hour**



# EMFULENI, cont.

## TECHNICAL SOLUTION: Pressure Management

- Automated pressure management valves on each supply line
- Reduced high bulk pressure; further reductions @ night
- \$800,000 construction commissioned Sept 2005

## FINANCING SOLUTION: Performance Contracting

- Water pressure management firm acting as ESCO
- Build-Operate-Train-Transfer to municipality after 5 years
- Fees: firm gets 20% of savings

## ALLIANCE ROLE: Trusted third party

- ✓ Developed **idea** and worked with water utility & municipality to implement it
- ✓ **Wrote RFP**, putting onus on bidders to find funding
- ✓ Helped **negotiate** contract

# EMFULENI, cont.

## RESULTS

- **Payback** period: <3 months
- Annual Savings:
  - Cost:** US \$ 3.8 million
  - Water:** 8 million kiloliters (kL)  
a reduction of >30%
  - Energy:** >14 million kWh
- **CO2** Reductions: 12,000 tonnes/year



# Spreading Success – New Watergy Programs

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## ■ Central America

- **Alliance + Econoler International to lead 1 year Watergy Program, funded by Inter-American Development Bank**
- Aya (Costa Rica), Idaan (Panama) and Water of Cortes Port (Honduras)
- USD 100,000

## ■ Caribbean Basin Countries

- **Same Partners**
- Bahamas, Barbados, Guyana, Haiti, Jamaica, Suriname, Trinidad & Tobago
- USD 400,000

# A World of Possibilities!

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- Annual world-wide investment of \$170 billion in energy efficiency through 2020 could:
  - **cut global energy demand growth** by at least half
  - **save \$900 billion a year in avoided energy costs**
  - **dramatically reduce greenhouse gas emissions**

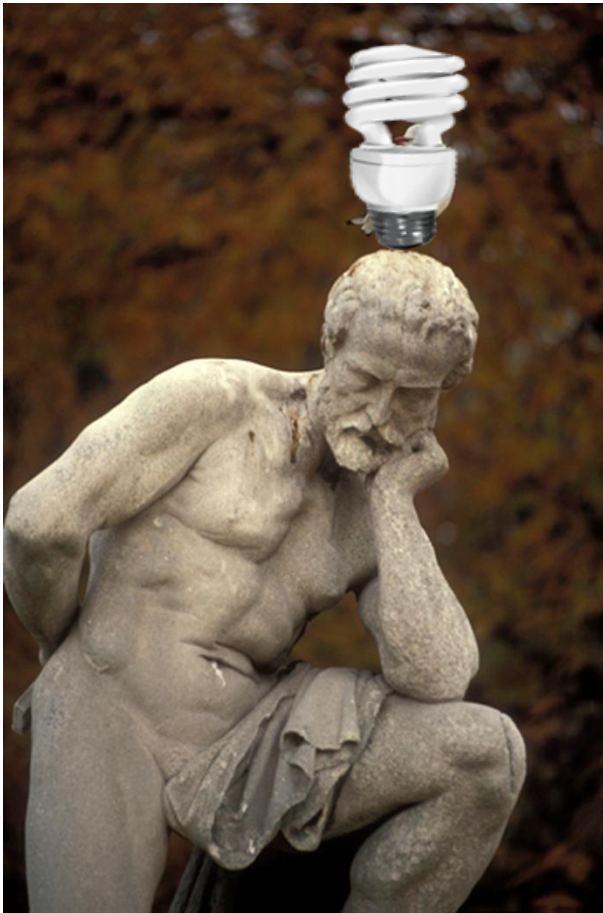
# Think About it.

# Energy Efficiency is...



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- ...the quickest, cheapest, cleanest way to extend our world's energy supplies
- ...the “First Tool” in the Arsenal for Fighting Climate Change
- ...the best investment we can make...
- ***...So what are we waiting for?***



# FROM PARADOX TO PARADIGM

## THE ROLE OF ENERGY EFFICIENCY IN CREATING LOW-CARBON ECONOMIES

MONDAY, DEC. 14, 2009 : 2:00 - 5:00 PM



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Business, programmatic and technical experts will highlight and discuss best practices for employing energy efficiency to reduce emissions while maintaining, if not improving, bottom-line corporate and economic growth. Case studies from both developed and developing countries will be analyzed.

***Panel chairs:*** Lena Ek, MEP Sweden  
Claude Turmes, MEP Luxembourg

***Speakers:*** Former Governor George Pataki  
Eelco van Heel, CEO, Rockwool International A/S  
Andreas Schierenbeck, CEO Siemens Building Tech.  
..and senior level speakers from:  
*Schneider Electric, Google, USGBC, IEA, ICLEI and NRDC*





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**Thank you!**

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