

# Opportunities for Private Sector Partnerships With Military Organizations

Alan Miller, International Finance Corporation

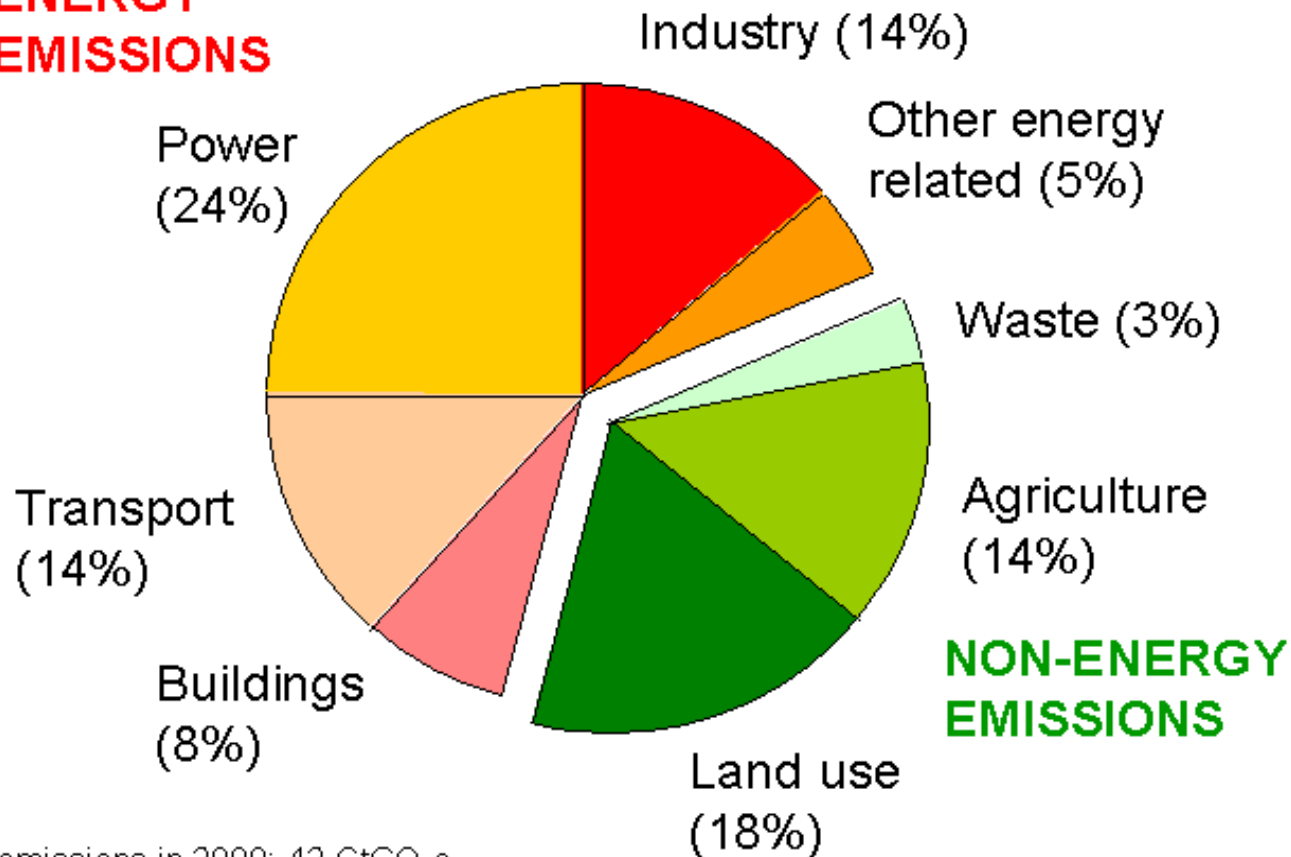
Kristen Taddonio, US Environmental Protection Agency

# Technology Part of Solution

- Agreed:
  - Climate Change is a security concern
  - Militaries can do their part
  - New technologies are necessary
- Good news:
  - Global efforts to accelerate climate technologies
  - Private sector partnership opportunities abound
  - World Bank Group and EPA can help

# Reducing GHG emissions: Targets of Opportunity

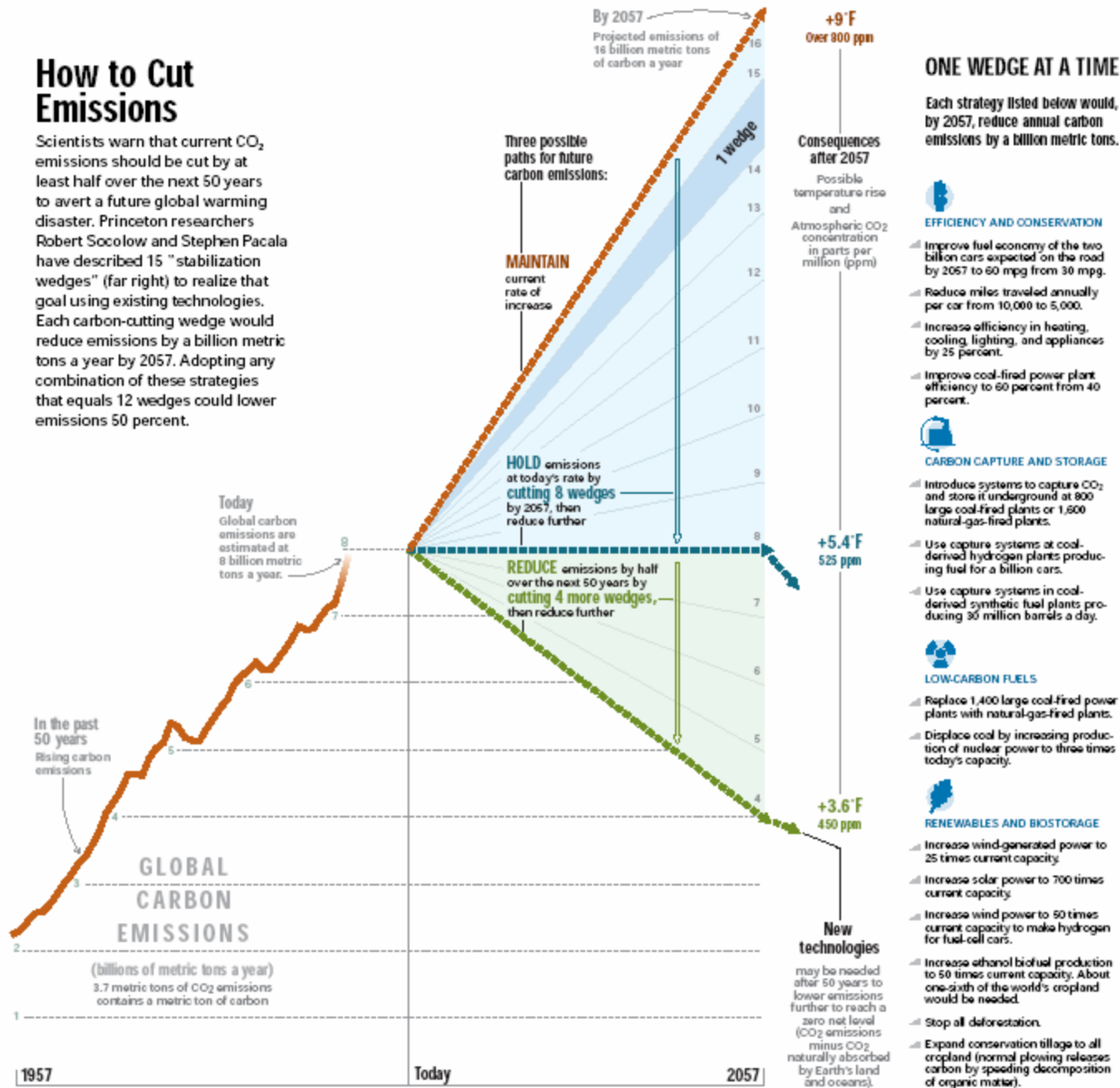
## ENERGY EMISSIONS



Total emissions in 2000: 42 GtCO<sub>2</sub>e.

# How to Cut Emissions

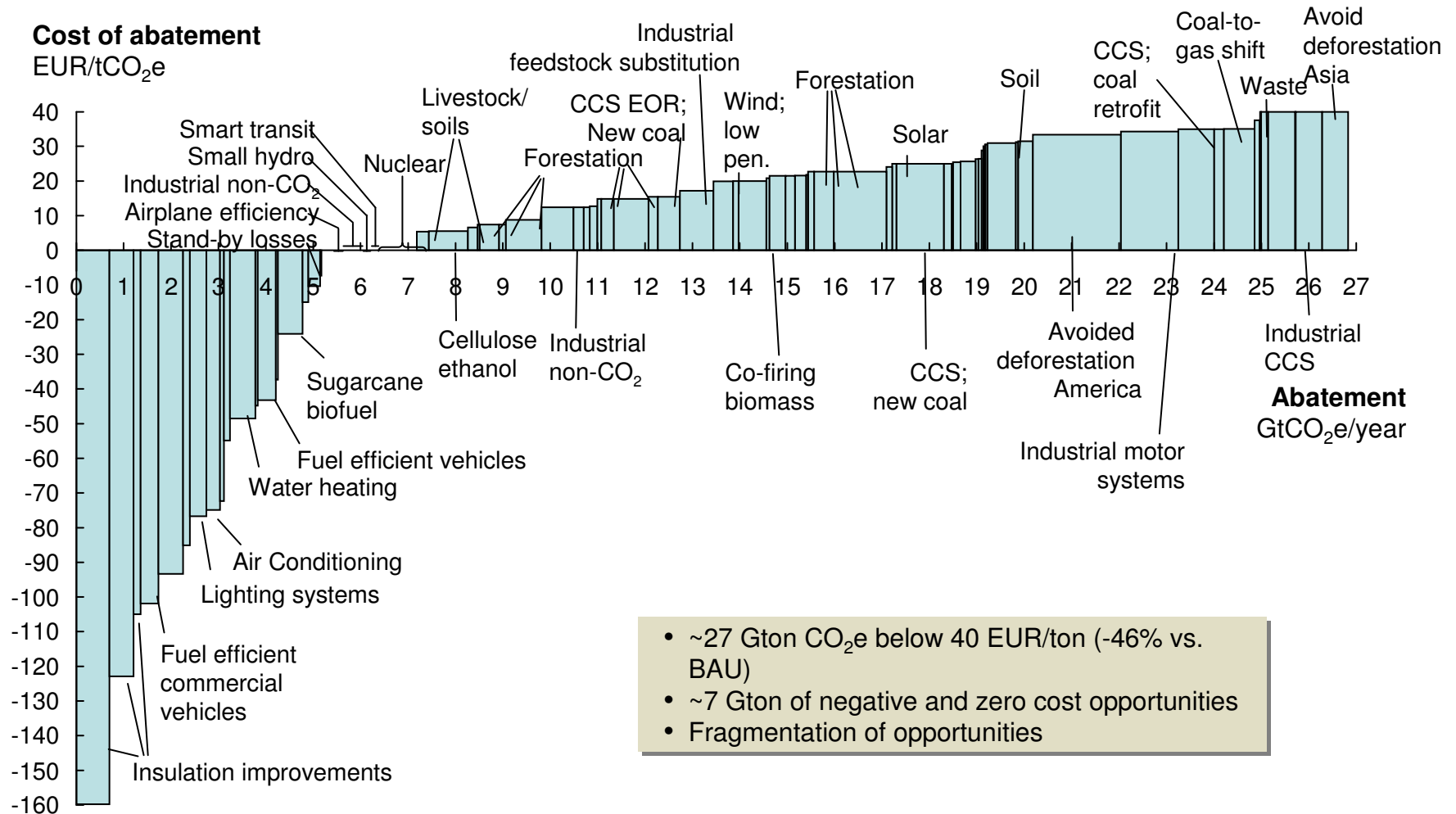
Scientists warn that current CO<sub>2</sub> emissions should be cut by at least half over the next 50 years to avert a future global warming disaster. Princeton researchers Robert Socolow and Stephen Pacala have described 15 "stabilization wedges" (far right) to realize that goal using existing technologies. Each carbon-cutting wedge would reduce emissions by a billion metric tons a year by 2057. Adopting any combination of these strategies that equals 12 wedges could lower emissions 50 percent.



SOURCE: ROBERT H. SOCOLOW AND STEPHEN M. PACALA, PRINCETON UNIVERSITY (STANDARD REPORT); GAO FIDE NATIONAL LABORATORY; GLOBAL CARBON EMISSIONS DATA; ICONS BY JONATHAN AVERY; GRAPHIC BY JUAN VELAZCO, NEW ART

# Cost-saving solutions exist and can be implemented now

2030



Source: McKinsey ...policy matters and prices are crucial 5

# Multilateral Development Banks:

## Source of Support for Clean Energy Measures

- World Bank “Strategic Framework” for climate change approved October 2008
- Commitment to increase clean energy lending by 30 percent/year
- Key role in supporting market conditions for clean energy investment
- \$5 billion pledged by 10 donors for new Clean Technology Fund, September 2008
- New technology strategy under preparation

# Illustrative WB Project: Clean Energy Financing

- Many energy efficiency opportunities require relatively small investments
- Energy efficiency financing requirements new to most developing country banks
- WB projects provide training and partial risk guarantees to engage banks
- Successful projects in China, Russia, eastern Europe

# World Bank Projects

- Working with India to implement renewable energy policy
- Supporting building code development
- Investments in wind energy projects and solar pv materials and cell manufacture
- Improving energy efficiency in energy intensive industries (e.g., cement, steel)
- Promoting high efficiency solar lighting products for rural Africa

# Clean Technology Fund

- US\$5.2 billion pledged by 8 donors Sept 2008
- Demonstrate, deploy, transfer commercially available low-carbon technologies
- Limited to eligible countries, primarily large emitters
- Managed by World Bank but participation by all MDBs
- Key issue: enabling private sector access while allowing for country oversight
- Eligibility discussion ongoing, first Trust Fund meeting Nov. 17
- Opportunities for input through stakeholder process

[www.worldbank.org/cif](http://www.worldbank.org/cif)

# New Technology Strategy

- Traditionally development projects are cautious in approach to new technology
- Climate change requires new approach
- WB to propose by January 1
- Possible strategies include advanced market commitments; support for technology centers; public/private projects

# Speeding Technology Solutions

- Policies
- Regulations
- Energy Codes
- Taxes

All need tools to help identify  
and promote efficient products!



# ENERGY STAR

- International program: Australia, Canada, The European Union, Japan, New Zealand, the United States and Taiwan
- The ENERGY STAR program labels energy-efficient products in more than 50 categories, including heating, ventilation, and air conditioning equipment, insulation, appliances, computers, homes, buildings, and even manufacturing plants
- Guaranteed energy and cost savings
- Specific guidance for procurement officials making smart purchasing decisions: [www.energystar.gov/purchasing](http://www.energystar.gov/purchasing)

# Military Benefits

- Energy efficient products save money fast
- Payback in remote military locations is even faster
  - Power savings reduce energy needs
  - Improved energy supply logistics
- Reduced operating costs reduce utility costs for military families in privatized housing
- Superior design and materials of certified energy efficient products reduce life-cycle ownership costs
- More secure energy grid

# Green Power Partnership

- The Green Power Partnership promotes procurement of green power
- Offers expert advice, technical support, tools and resources
- Many Military partners



# Military Benefits

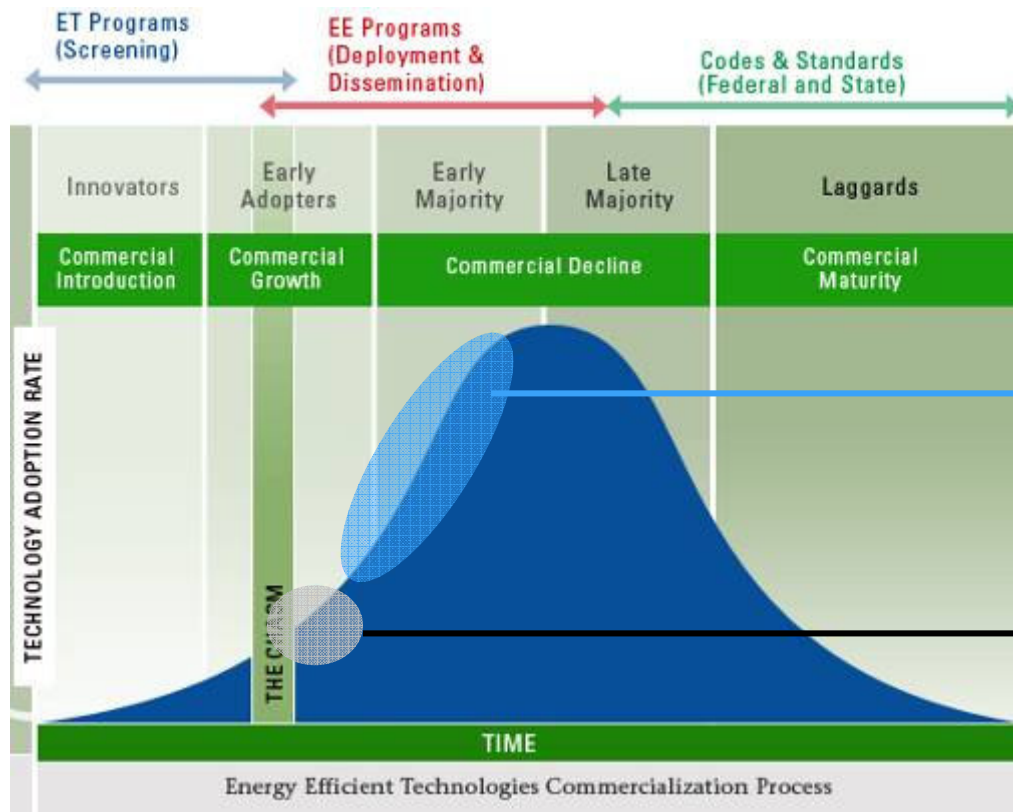
- Reduced dependence on the reliability and price of grid electricity, Improves energy security
- Cost-effective in areas with significant renewable energy resources
- Significant savings in remote regions where fuel is expensive or logistics are complicated
- Minimal operating costs
- Excess power can often be sold to the local utility
- Additional Benefits:

*“The U.S. Air Force’s green power purchase of over 300,000 MWh annually is playing an important part in controlling its long-term energy costs. For example, Edwards Air Force Base in California purchases 138,000 MWh annually, enough to cover 60 percent of its power needs. The Base is utilizing long-term fixed-price green power contracts as a financial hedge against electricity market volatility and estimates its dollar savings over a five-year purchase period at almost \$42 million.”*

*-US EPA Green Power Partnership*



# Need to Go Even Further Introducing: Climate Choice



## ENERGY STAR

- mass market consumer
- cost-effective (2 to 3 year payback)
- proven technology
- no sacrifice in performance
- reliable savings – easy design, installation, and maintenance

## CLIMATE CHOICE

- new recognition program
- focuses on technologies earlier in adoption curve
- verifies performance, greenhouse gas and energy savings
- technologies may be more costly until economies of scale achieved
- provides customized technology assistance
- look for the Climate Choice logo

# Example: Climate Choice

## Advanced New Home Construction



- Super efficient insulation
- Best-available windows
- 100% efficient lighting & appliances
- Solar hot water in warm states
- Efficient water distribution
- Top-tier heating and cooling equipment

....Cuts energy use in half!

Renewable energy to reduces  
carbon emissions to zero.



# Climate Choice

- Combined heat & power
- Additional technologies on the way
- Memorandum of Understanding signed with US Army
- Stay tuned!

# Militaries are part of the Solution

- Climate Choice welcomes military partners
  - Military centers of excellence, sophisticated purchasing, and technical expertise
- Buy most energy efficient technologies and products
- Demand buildings at top 5% of efficiency
- Specify Life-Cycle Performance in every buy
- Quantify and pay for carbon benefits
- Favor suppliers with superior carbon footprints
- Additional wind and solar on bases

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[www.epa.gov/cppd/climatechoice](http://www.epa.gov/cppd/climatechoice)

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