Carbon Standards: What Is the Right Choice for the United States and Canada?

Woodrow Wilson Center Forum

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AB 32; Global Warming Solutions Act

- 2000 levels by 2010
- 1990 levels by 2020 – a 30% reduction
- 80 percent below 1990 by 2050 (Executive Order)

Low Carbon Fuel Standard (LCFS)

- Reduce “carbon intensity” 10 percent by 2020
- Replace 20 percent of California on-road gasoline consumption
- Applies to all refiners, blenders, producers or importers

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Western States Petroleum Association

California Air Resources Board (CARB) wants climate change action plan

California Energy Commission (CEC) wants coherent energy plan

Consumers want a balanced, cost-effective program that:

- Reduces greenhouse gas emissions
- Let's them drive where they want when they want
- Allows them to affordably heat and cool their homes and turn their lights on
- Doesn't bankrupt them or ruin the economy

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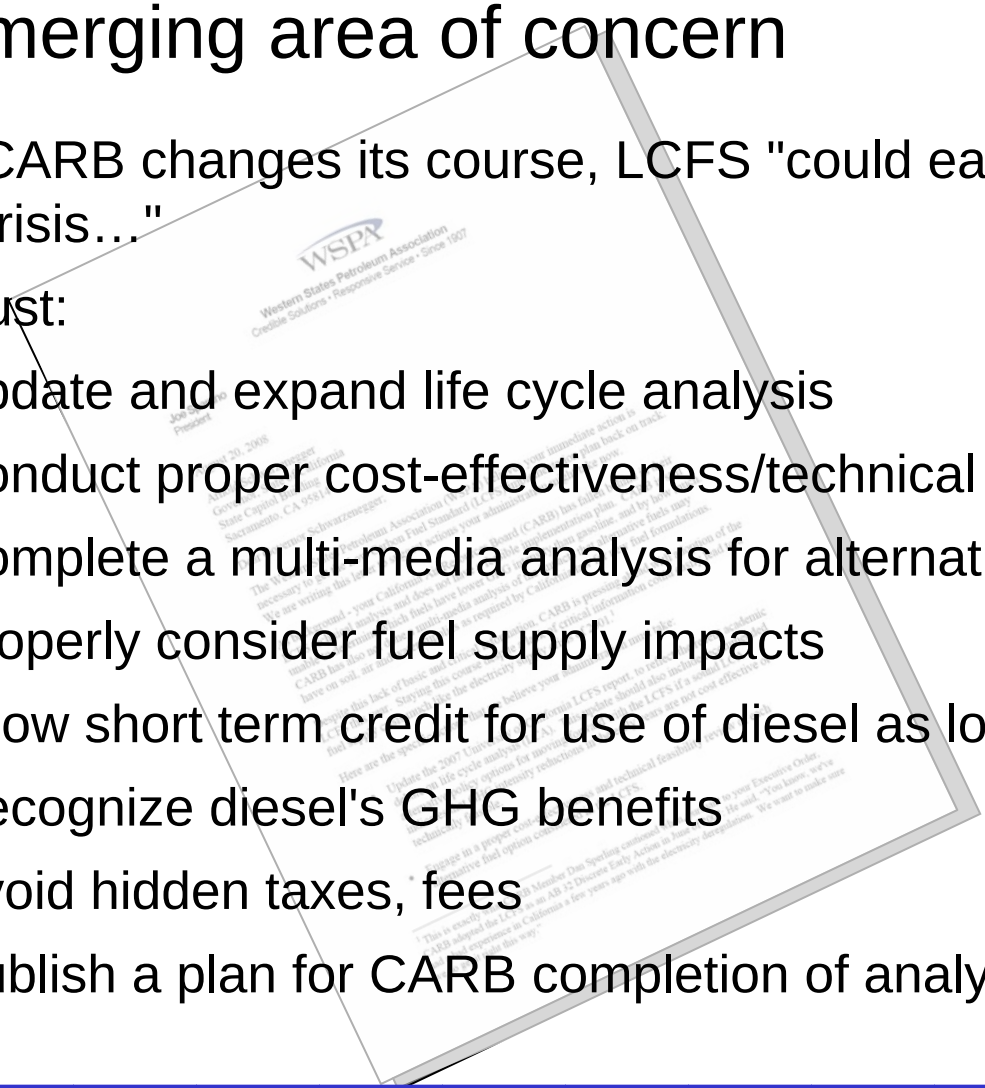
LCFS: emerging area of concern

- Unless CARB changes its course, LCFS "could easily lead to a fuel supply crisis…"
- State must:
  - ✓ Update and expand life cycle analysis
  - ✓ Conduct proper cost-effectiveness/technical feasibility reviews
  - ✓ Complete a multi-media analysis for alternative fuels
  - ✓ Properly consider fuel supply impacts
  - ✓ Allow short term credit for use of diesel as lower GHG fuel
  - ✓ Recognize diesel's GHG benefits
  - ✓ Avoid hidden taxes, fees
  - ✓ Publish a plan for CARB completion of analyses



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What does success look like?

- Honest discussion of impacts on consumers, jobs
- Adequate, reliable, affordable fuels available
- Market-based (cap & trade)
- Broad use of offsets
- Realistic compliance timelines (LCFS)
- Comprehensive, science-based life cycle analysis
- Diesel as a transition fuel
- Reasonable assessment tools
- Equitable fees
- Cost effective, technically feasible technologies/fuels
- Ability to harmonize with federal/international programs

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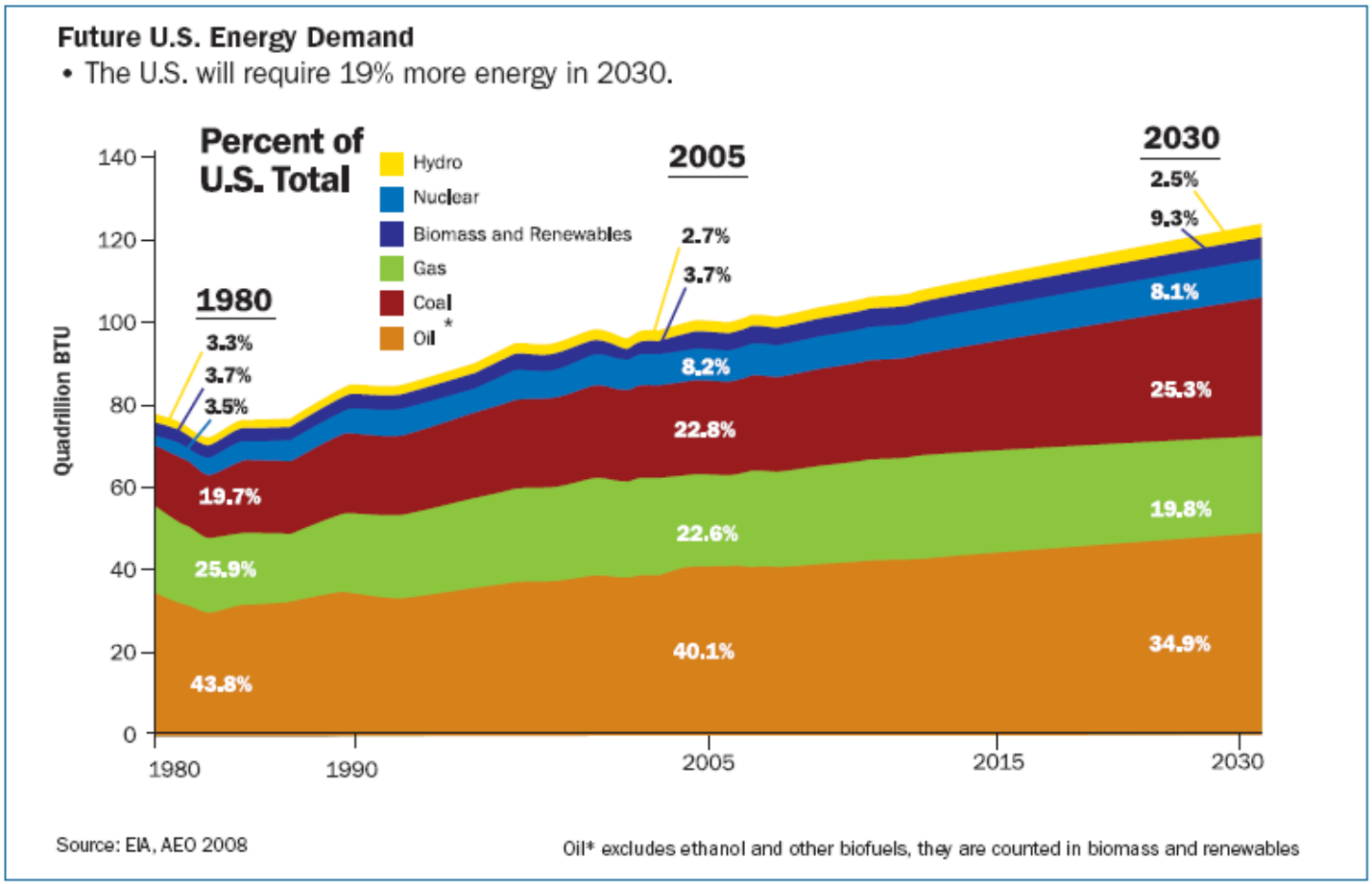
Future energy demand; keeping perspective



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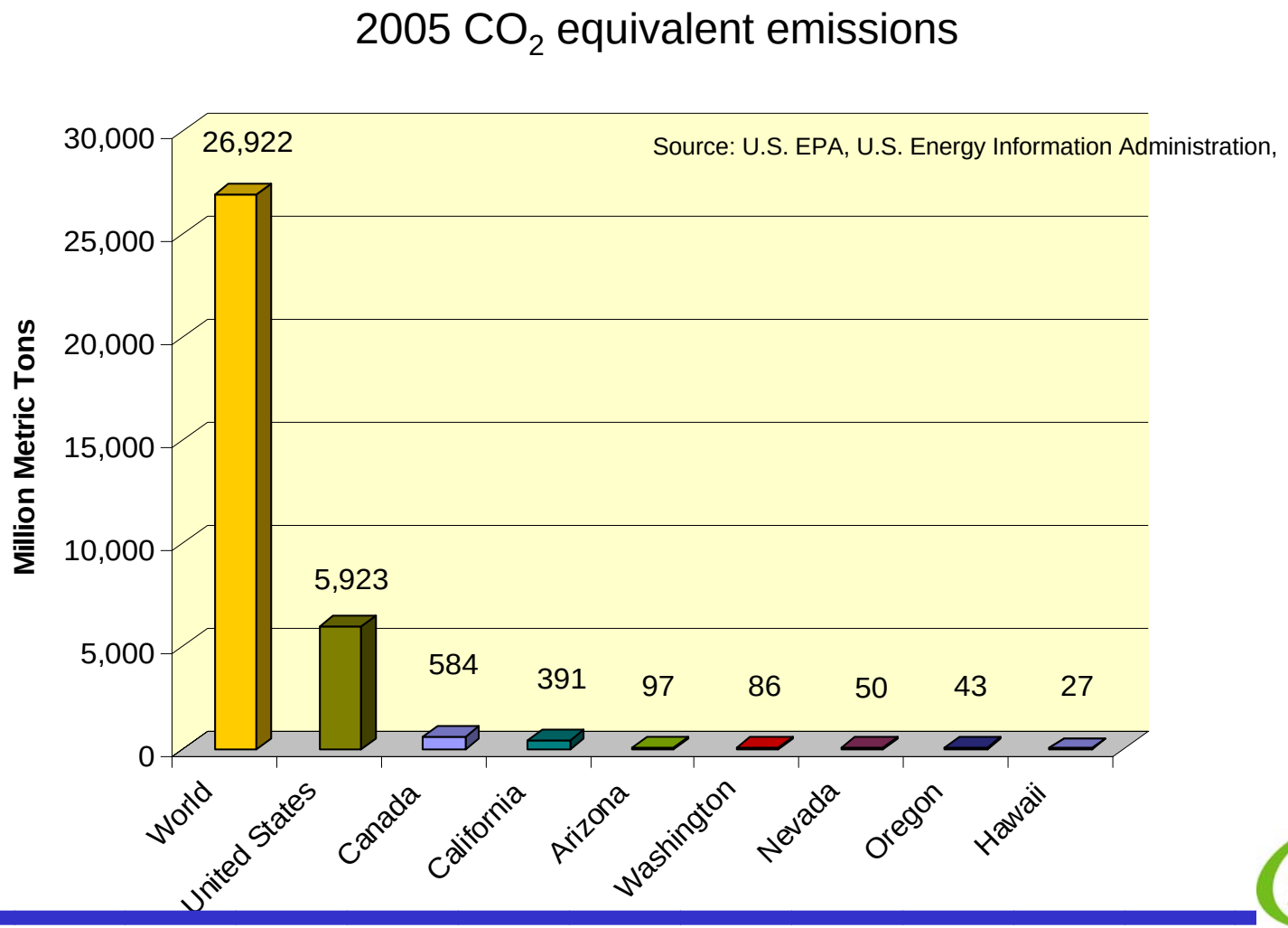
GHG emissions: keeping perspective



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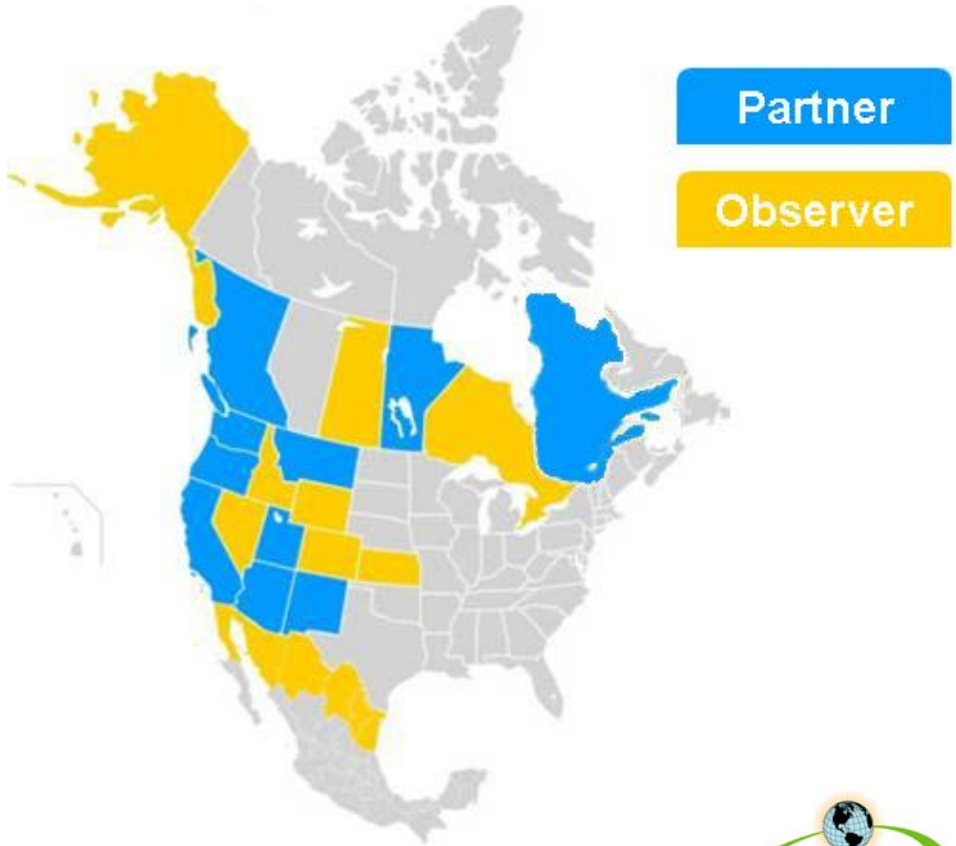
Western Climate Initiative

WCI Partners

- Arizona
- British Columbia
- California
- Manitoba
- Montana
- New Mexico
- Ontario
- Oregon
- Quebec
- Utah
- Washington

WCI Observers:

- Alaska
- Colorado
- Idaho
- Kansas
- Nevada
- Wyoming
- Saskatchewan
- Baja California
- Chihuahua
- Coahuila
- Nuevo Leon
- Sonora
- Tamaulipas



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Canada-US energy relationships

- Canada is the largest, source of US energy supply
- Canada has 178 billion barrels of proven oil reserves
- Canada supplied US with 2.4 million barrels/day of crude and refined products in 2007, 18% of US imports
- In 2007, oil sands production averaged 1.32 million barrels a day, virtually all of it exported to US
- International Energy Agency projects Canada's oil sands will represent 1/3 of non-OPEC oil production by 2030

Source: Government of Alberta, Canada
U.S. Energy Information Administration

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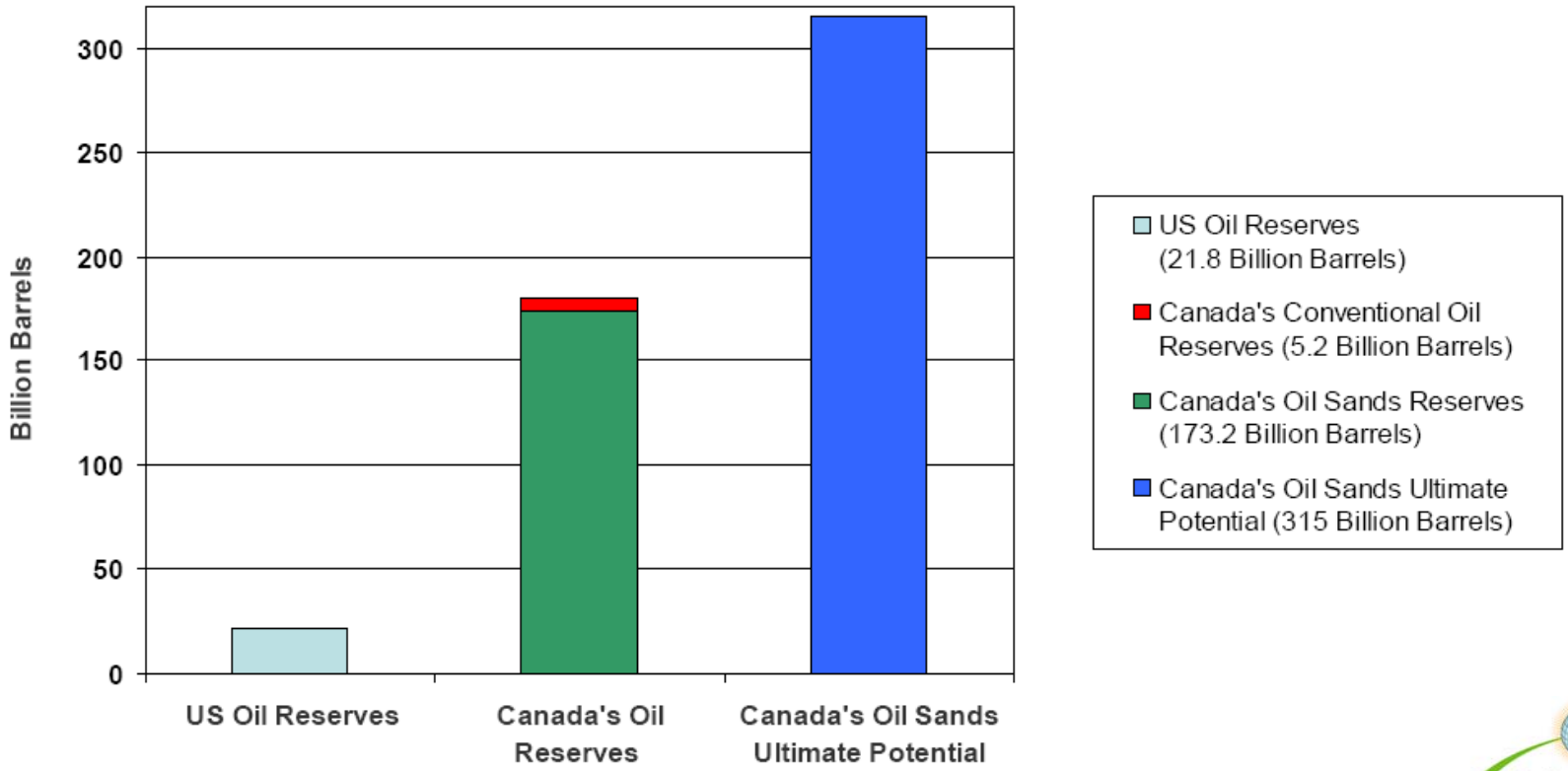
Canada-US energy relationships



Source: Government of Alberta, Canada

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Climate change initiatives – forecast economic benefits and estimated costs

- CARB's Economic Analysis indicates Draft Scoping Plan would increase
  - ✓ Overall production by $27 billion
  - ✓ Gross state product by $4 billion
  - ✓ Personal income by $14 billion
  - ✓ Per capita income by $200
  - ✓ Jobs by 100,000
- Stern Report – cost ~1% of global domestic product (e.g. CA domestic product is $1.8 trillion; 1% of $1.8 trillion is $18 billion)
- Analysis Group - Annual allowance auctions could cost from $760 million to $39 billion in 2020. (e.g. In FY 2006-2007, California collected approximately $108 billion in taxes.)
- Brookings Institute estimates climate change program costs at billions annually

Source: California Air Resources Board Climate Change Draft Scoping Plan Economic Analysis Supplement, September 2008
California Air Resources Board Climate Change Draft Scoping Plan June 2008
The Stern Review, The Economics of Climate Change:. Cambridge, UK 2006
Analysis Group, California Fiscal Receipts from an Allowance Auction Under Alternative Assumptions About the Allowance Price, Scope of the Cap-and-Trade System, and Share of Allowances Auctioned, April 2008

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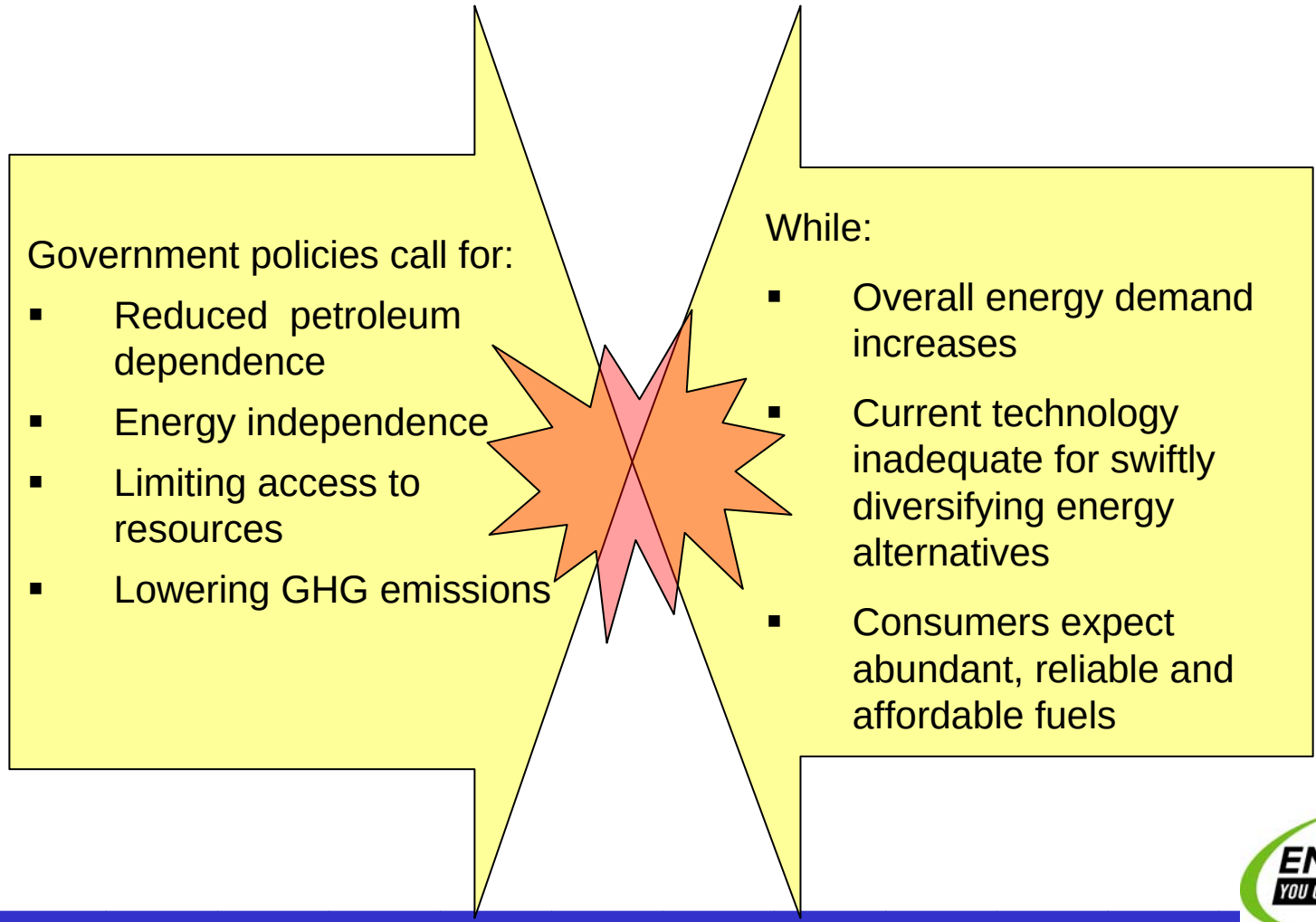
There are big challenges ahead



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Enhancing chance of success . . .

Climate change and energy plans are thoughtfully integrated within a realistic time-frame

Technology is developed cost-effectively, resulting in adequate, reliable and affordable fuels

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