

Challenges to Adequate, Reliable, Affordable Energy

Challenges and Risks to Providing Adequate, Reliable, Affordable Energy

and the unintended consequences of Climate Change regulation

California and Federal Programs

AB 32 Global Warming Solutions Act – 2006

- Reduce GHG 30% to 1990 levels by 2020
- Cut 80% below 1990 levels by 2050
- Compliance starts 2012
- CARB administrative fees paid thus far exceed \$57 million!
- Requires an Auction Tax for operating permits
- **Federal Legislation (Pending)**
 - Waxman Markey- Cap-and-Trade
 - “American Clean Energy and Security Act of 2009”



Challenges to Adequate, Reliable, Affordable Energy

CA - Low Carbon Fuel Standard (LCFS)



- Adopted April 2009
- Reduce “**carbon intensity**” of transportation fuels at least 10% by 2020; additional reductions post-2020
- Assigns carbon intensity values to crude oil based on origins
- Provides 10% of total GHG reductions to meet AB 32
- Designed to drive market toward new, non-fossil low carbon fuels, vehicles
- **No compliance pathway identified**

AB 32 Impact Is Across All Sectors

- **AB 32 Auction Tax is a proposed method of purchasing permits for every ton of GHG emissions and would require:**
 - California brewery to pay \$4.5 million per year, or more than **\$45 million over 10 years**
 - **Los Angeles Department of Water & Power (LADWP) to pay \$246 million per year or \$2.5 billion in 10 years**
 - Power utilities must provide power from 33 percent renewable energy sources such as wind and solar energy by 2020.
 - UCLA (co-generation plant) to pay \$11 million per year

Post – Economic Analysis

Estimated costs/benefits of AB 32 & LCFS

<p>CARB¹</p> <ul style="list-style-type: none"> ▪ \$24.9 billion in <u>direct costs</u> ▪ \$40.4 billion in savings 	<p>AB 32</p>	<p>CA State University Sacramento²</p> <ul style="list-style-type: none"> ▪ \$63.9 billion <u>direct costs on small businesses</u> ▪ \$49,691 annual cost per small business ▪ \$3,857 annual cost per household
<p>CARB³</p> <ul style="list-style-type: none"> ▪ \$3.4 billion in annual cost savings by 2020 ▪ Net reduction in criteria pollutants ▪ Significant reduction in greenhouse gas (GHG) emissions 	<p>LCFS</p>	<p>Sierra Research⁴</p> <ul style="list-style-type: none"> ▪ Fuel costs increase by \$3.7 billion per year in 2020 ▪ NOx emissions increase by more than 5 tons per day ▪ No detectable change in climate

Source: ¹ California Air Resources Board, Climate Change Scoping Plan Appendices, Volume II, **December 2008** page G-I-8

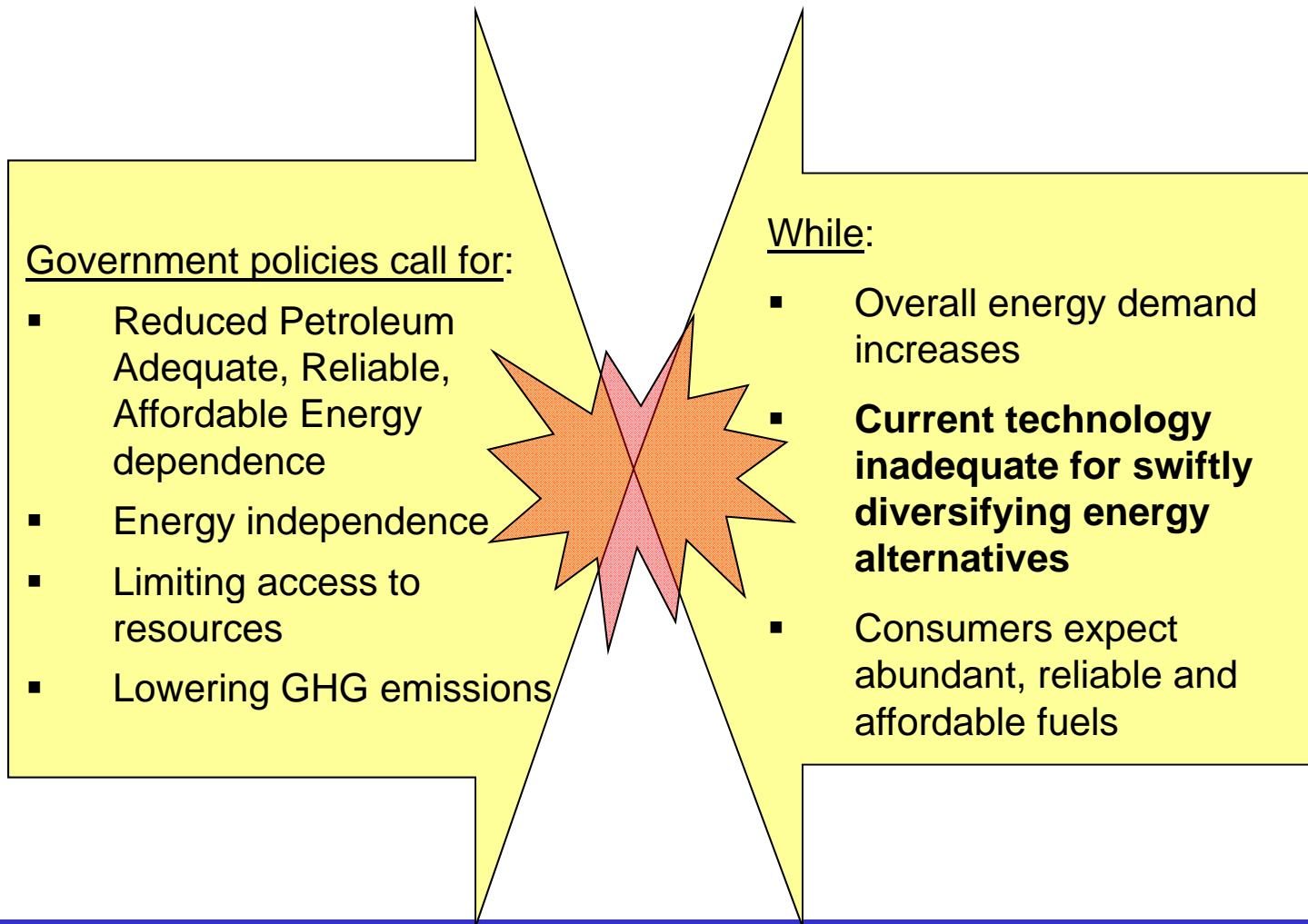
² Sanjay B Varshney, Dean, College of Business Administration, CSU Sacramento and Dennis H. Tootelian, Professor of Marketing & Director for Small Business, CSU Sacramento, June 2009

³ California Air Resources Board, Staff Report: Initial Statement Of Reasons, Proposed Regulation To Implement The Low Carbon Fuel Standard March 5, 2009

⁴ Preliminary Review of the CARB Staff Analysis of the Proposed Low Carbon Fuel Standard (LCFS) Sierra Research, Inc. April 8, 2009

What Does This Conflict in Data Tell Us?

WE NEED TO WORK TOGETHER TO DEVELOP SOLUTIONS



Federal Cap & Trade

Economic Impact

Consumer Impact

- Gasoline prices increase 58%
- Electricity costs increase 90%

(Heritage Foundation Economic Study by 2035)

Natural gas prices increase 55%

Business and Industry Impacts

(API Fact Sheet, Heritage Foundation)

- API predicts that ***“U.S. refining could plummet by as much 4.4 million bpd”***
- **Job Loss in perspective** : half the predicted loss = approx. 15 U.S. refineries
 - 2 million bpd by 15 refineries avg. 500 employees = **7,500 jobs lost**
 - A loss of 4 million bpd could close **30 U.S. refineries, 15,000 jobs lost**
 - Job losses in **contract support businesses** may be equal numbers!
 - Compliance could cost one refining company over **\$ 6 Billion per year!!**
 - Exports refining production and jobs overseas

Jobs Lost Nationally

(Heritage Foundation Economic Study)

- Predicted combined manufacturing sector job loss by 2035 = 1.38 million

Federal Cap and Trade

Clean Energy and Security Act of 2009

Decreases Security and Increases Environmental Risk

- Cap and Trade increases dependency on foreign sources of not only crude oil, but gasoline and diesel. Increases U.S. vulnerability to OPEC's policies and increase funding to nations hostile to Americans.
- Exporting fuel production to foreign countries that will not comply with GHG standards or environmental control of emissions is detrimental to GHG reduction and will likely increase GHG emissions*

*Center American Energy Security, Washington D.C.

Federal Cap & Trade Bill

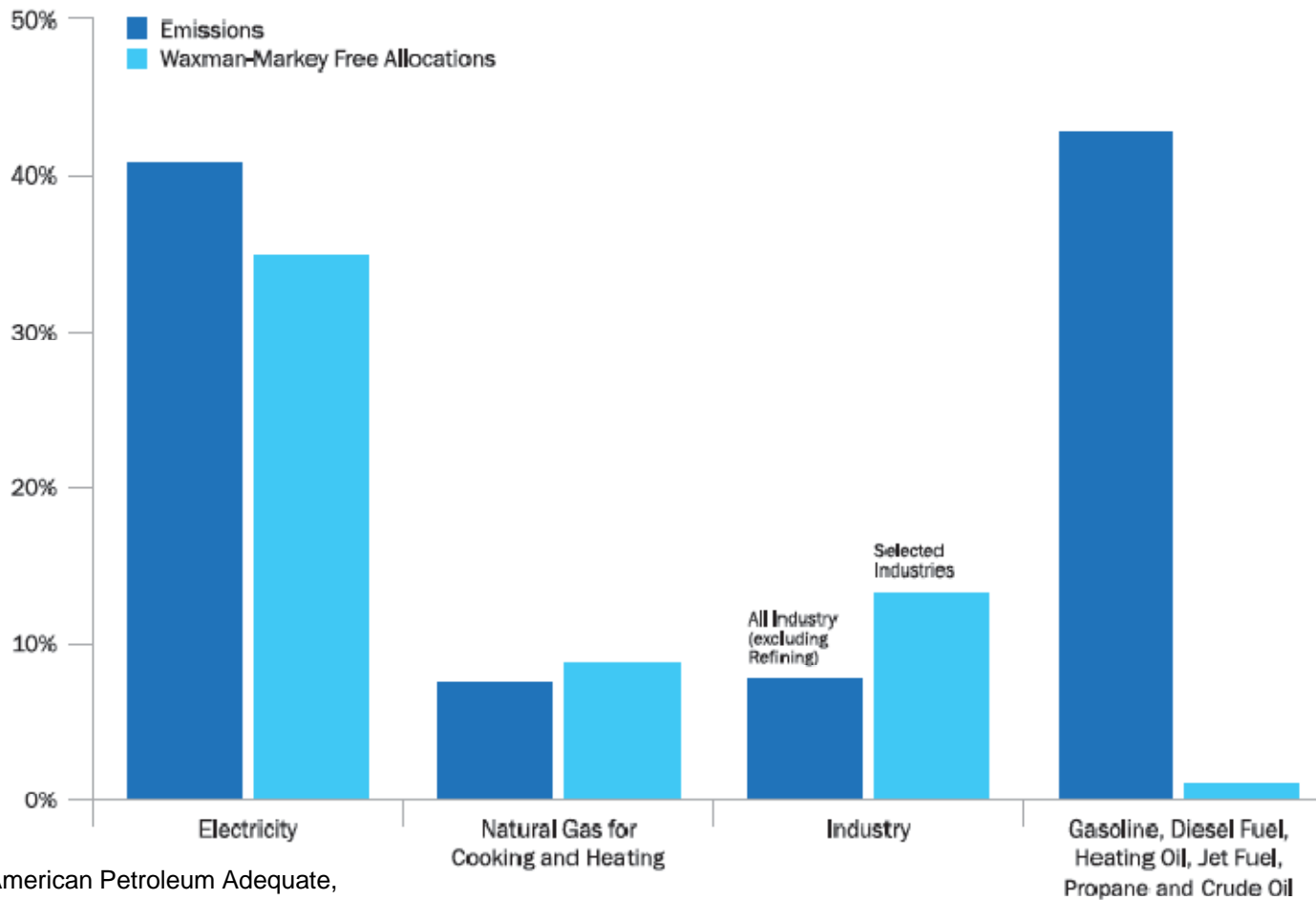
- Inequitably distributes emission allowances to various sectors
- Refiners are responsible for **44%** of total emissions,
 - Refineries (4%)
 - As well as consumer emission from planes, trains, automobiles, heating oil (40%).
- Yet refiners are allocated only 2% of allowances.
- In contrast, other sectors receive free allocations that meet or exceed their obligation.

California – Fact

- Per CARB survey, Top 5 GHG emitters are out-of-state electric power plants providing CA power.
 - Power plants produce 63% of California GHG inventory
 - Refineries account for only 18%

Inequitable Distribution of Allowances

2016 CO₂ Emissions from Energy vs. Waxman-Markey Free Allowance Allocations
(as percent of EIA Reference Case CO₂ Emissions)



Source: American Petroleum Adequate, Reliable, Affordable Energy Institute

Concerns with Proposed Climate Change Programs

- Need comprehensive **economic analysis** prior to passing law
- Consider energy **adequacy, reliability,** facts in policies
- Must be **realistic** about green energy costs and the time it takes to develop technologies

- Economy requires readily **available and affordable energy today,** not just the promise of it 10-20 years from now
- Required reductions in carbon emissions could **result in increased volatility in energy sector**
- There is zero likelihood of an energy transition occurring overnight, at little cost, and with no inconvenience

REALITY CHECK

International Energy Agency World Energy Outlook 2008

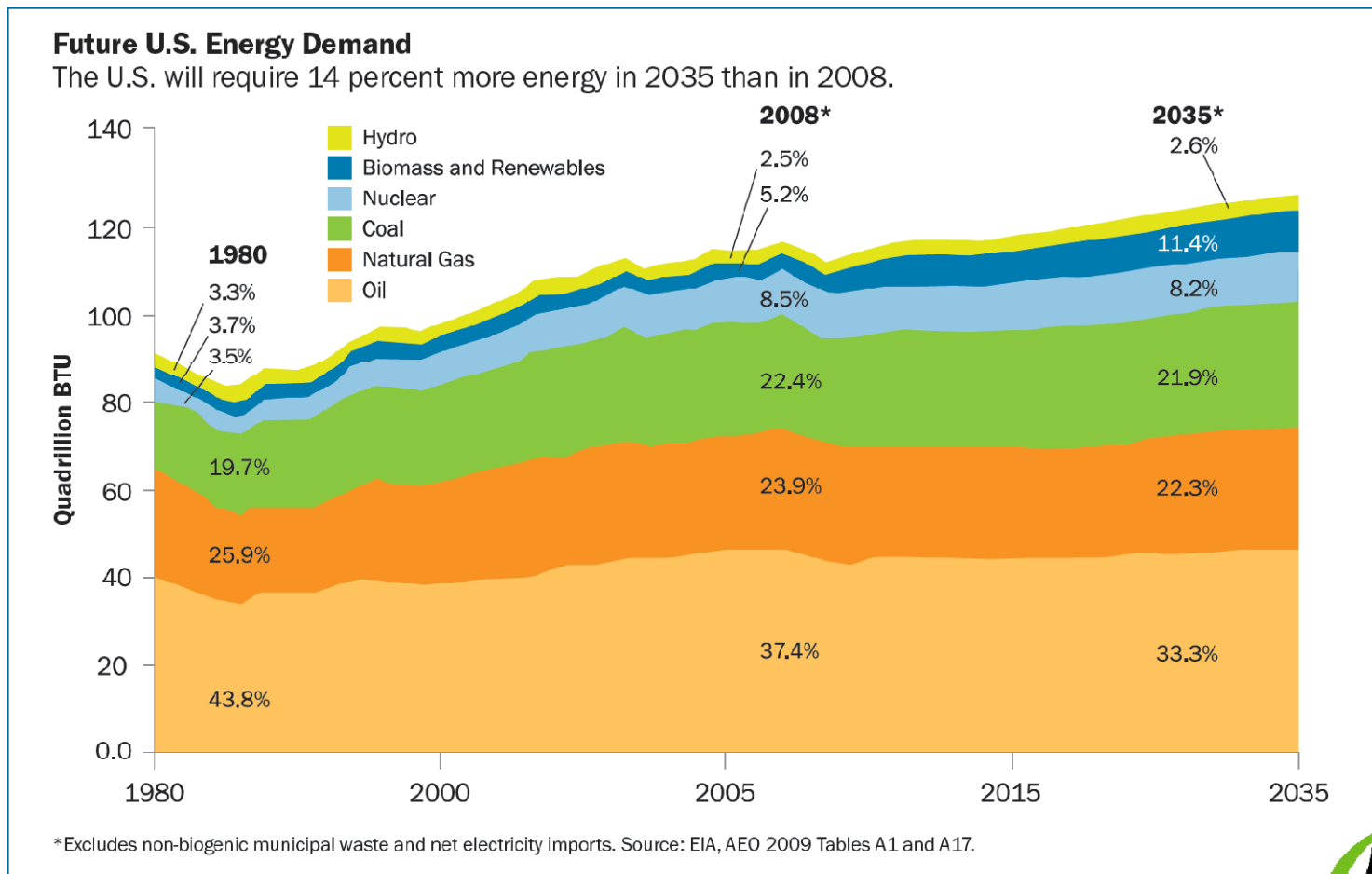
-“oil is the world’s vital source of energy and will remain so for many years to come even under the most optimistic assumptions about the pace of development of alternative technology”

U.S. Energy Information Administration (EIA)

- “projection show that by 2030, the nation will still depend on fossil fuels-oil, gas and coal-for 78% percent of its energy”

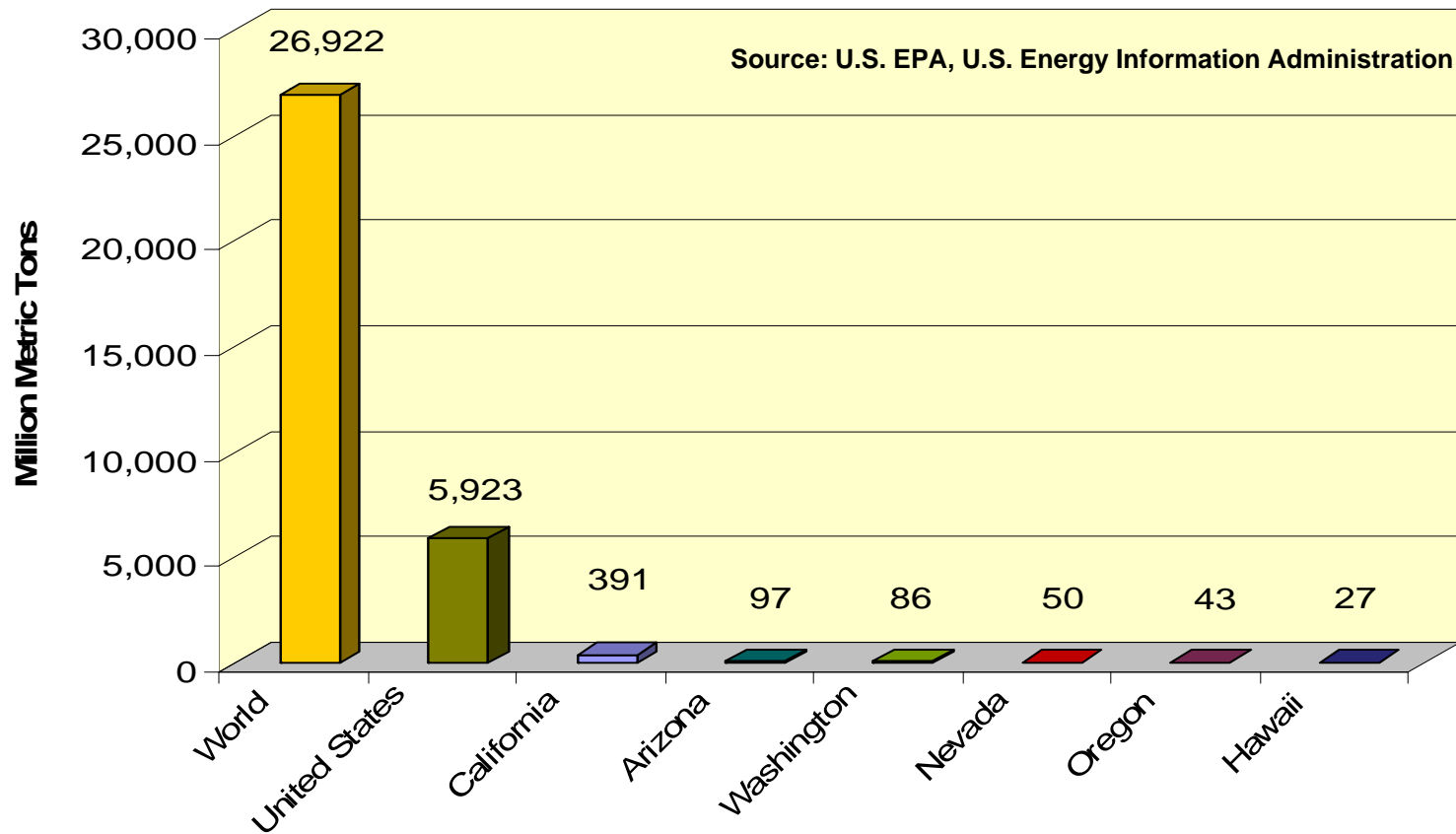
Reality Check

Future U.S. energy supply projections



GHG emissions: keeping perspective

2005 CO₂ equivalent emissions



Be Aware of AB 32 and Fed Cap & Trade Economic Impact



<http://www.jobs2010ca.com/>

<http://www.ab32ig.com/>