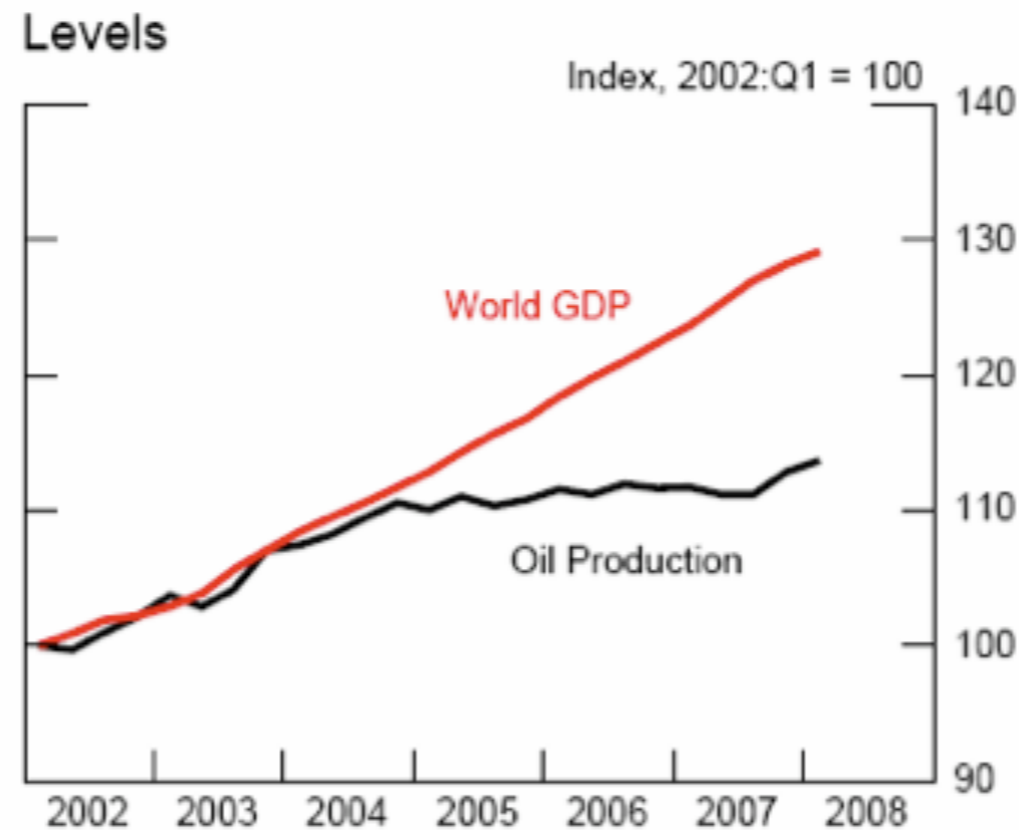


# Peak Oil, EVs and the Presidio MBA



Max S. Dunn II  
October 7, 2008



**Peak Oil**

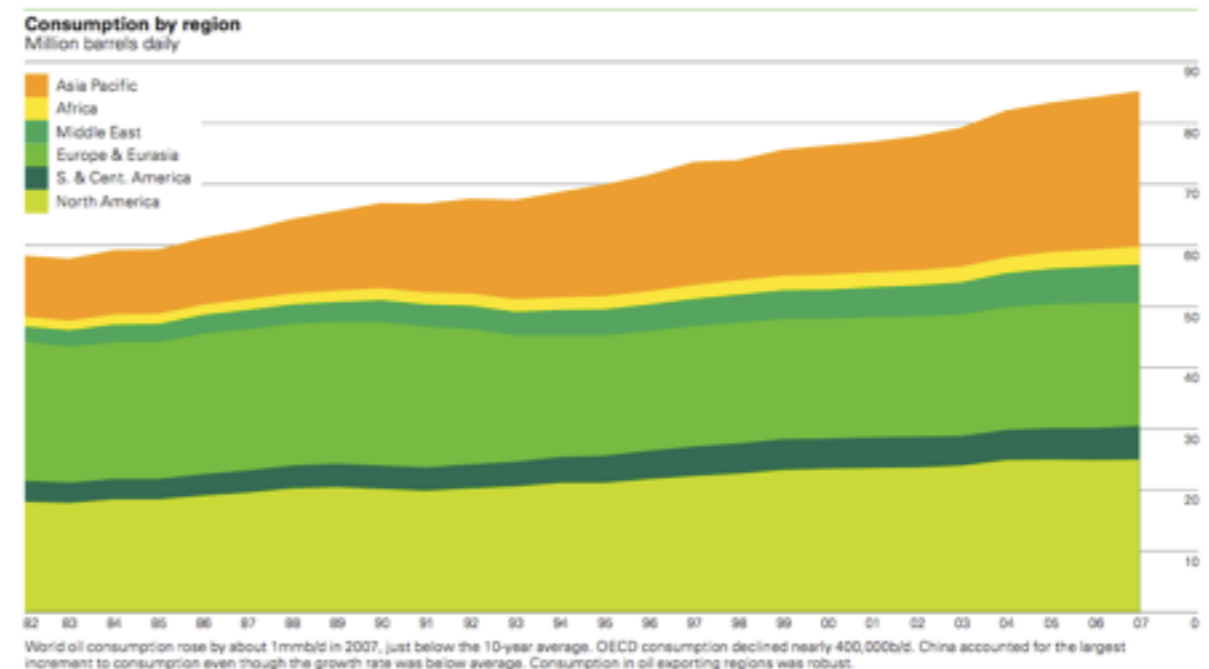
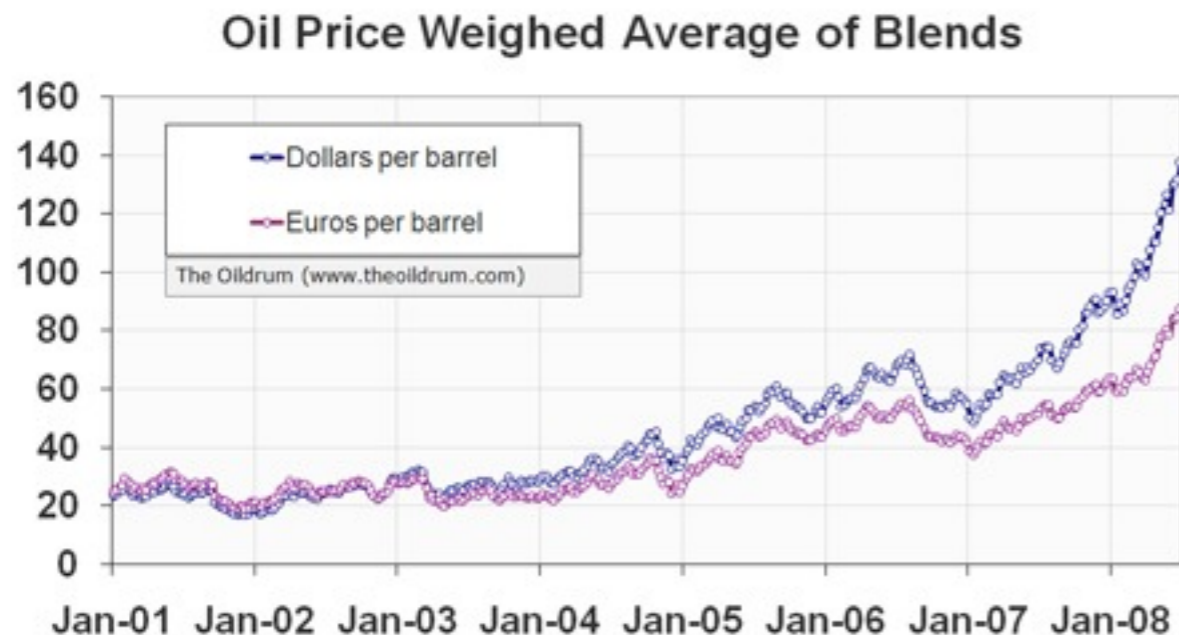
# What is Peak Oil?

- We won't ever “run out” of oil
- Peak oil really means peak “production”



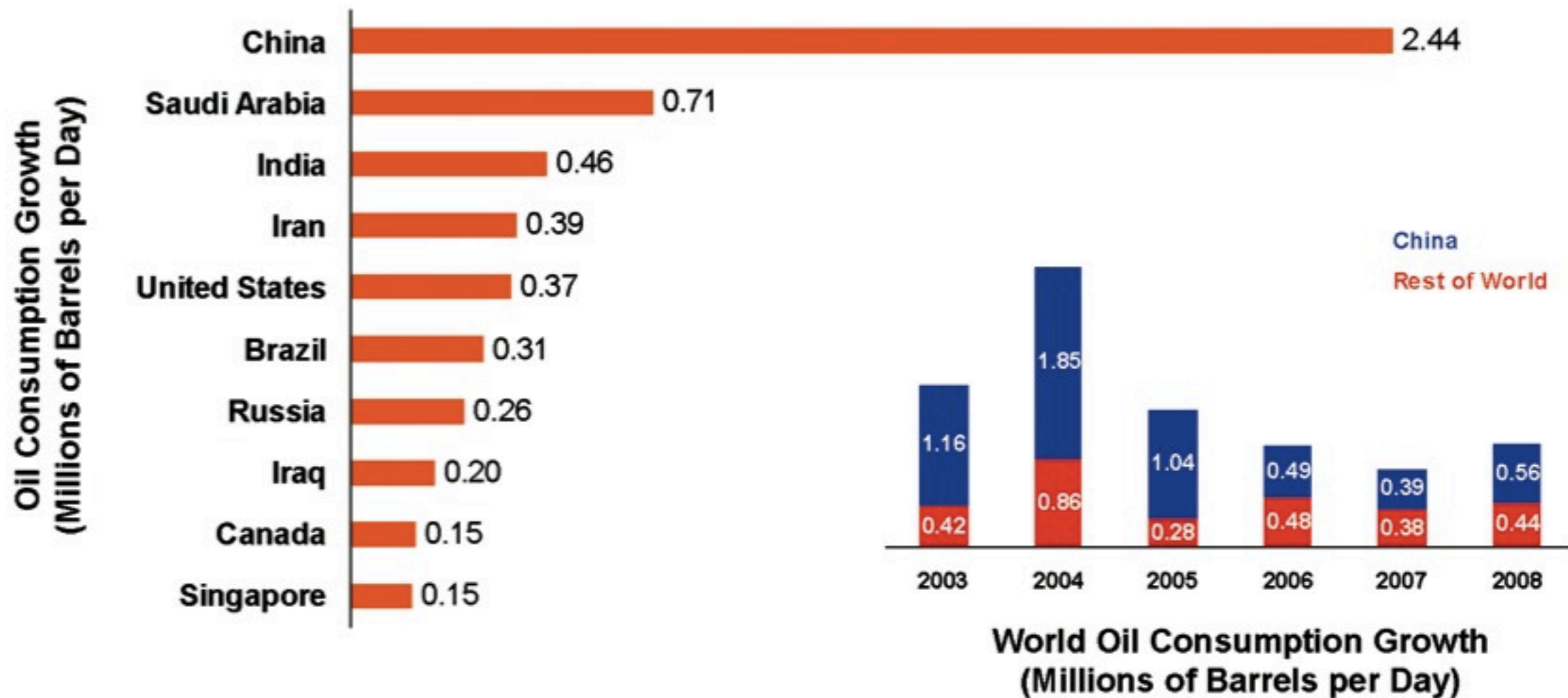
# Rising Prices and Demand

- Prices have tripled since 2003
- Yet demand is still rising at 1.5% to 2% per year



# China's Oil Thirst

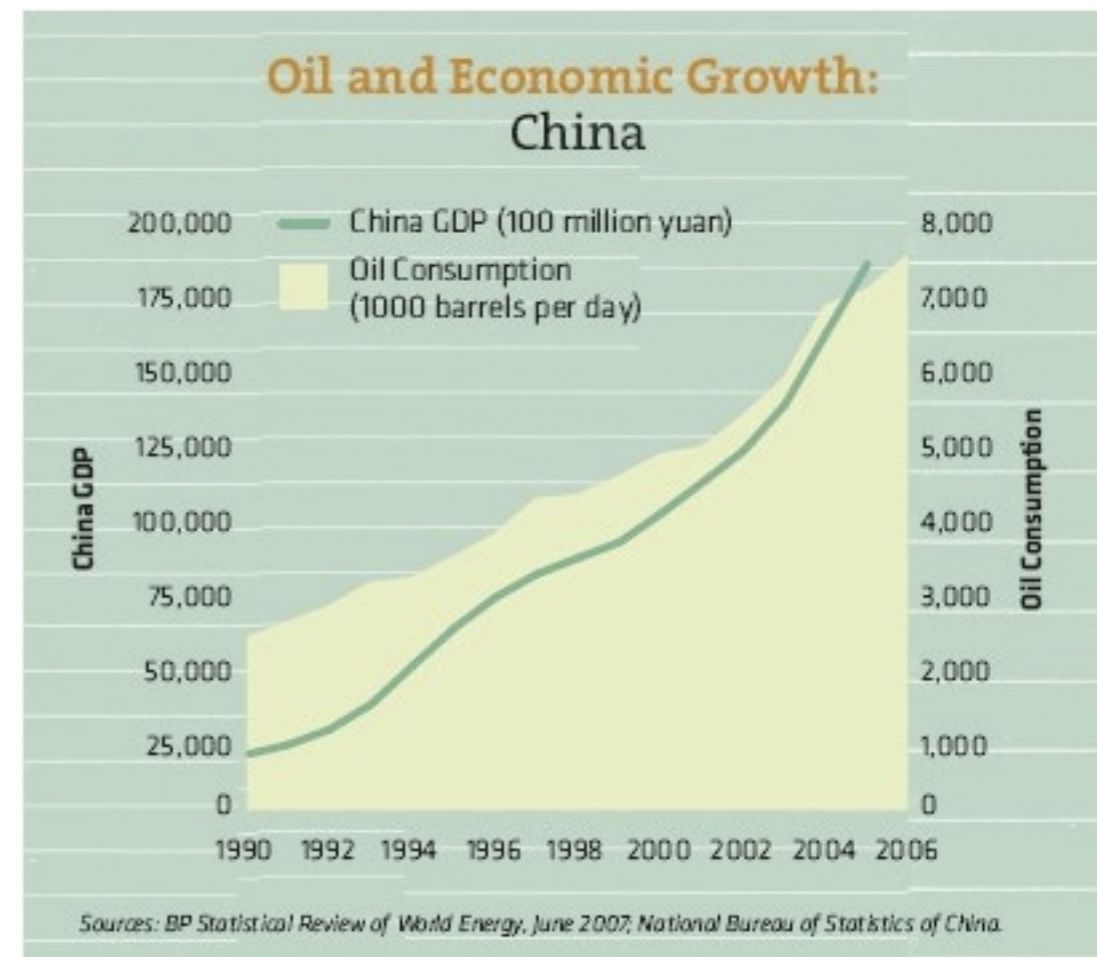
Figure 4 Oil Consumption Growth by Country from 2003 to 2008



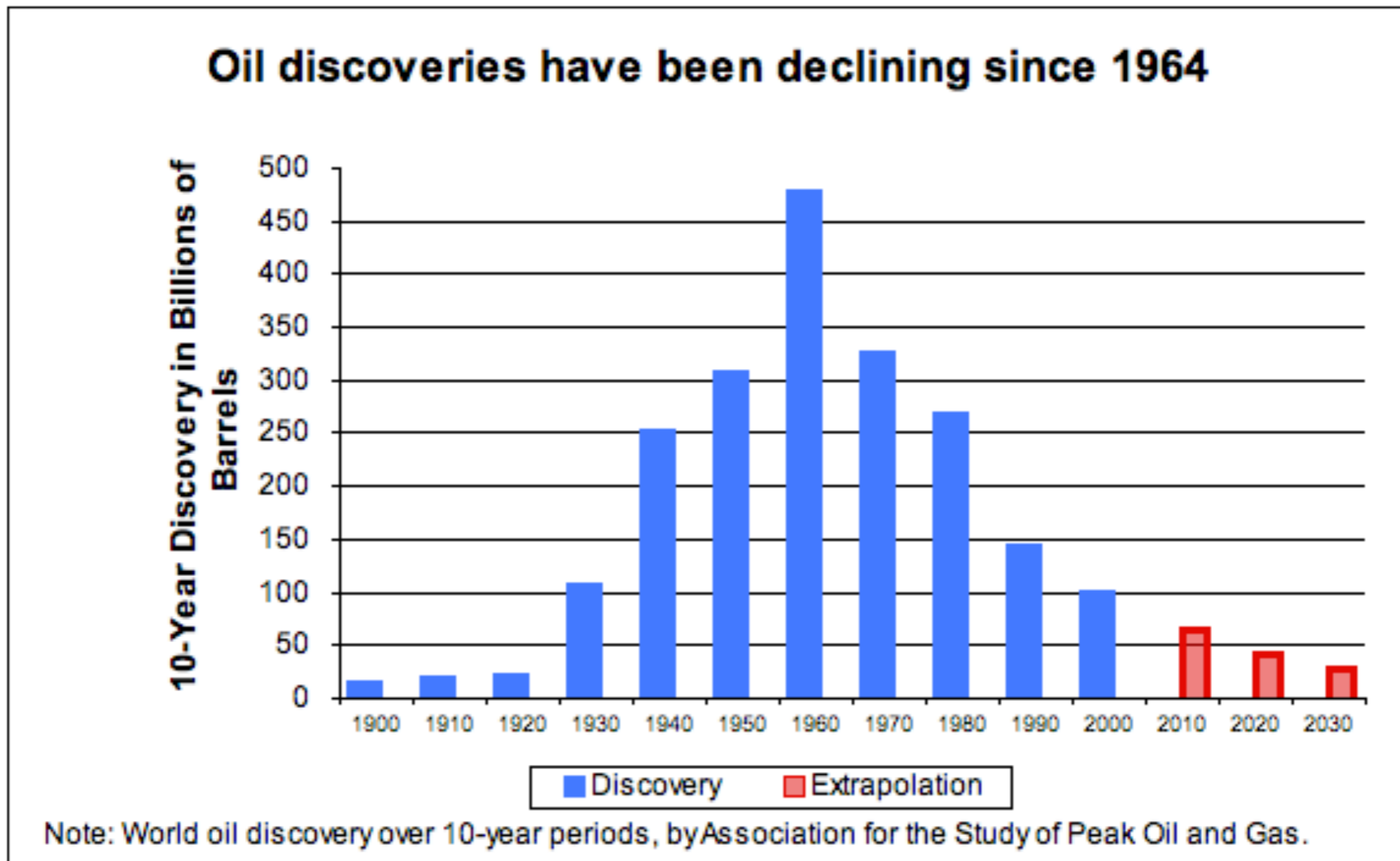
Source: Energy Information Administration

# Why Can't China's Scale Back?

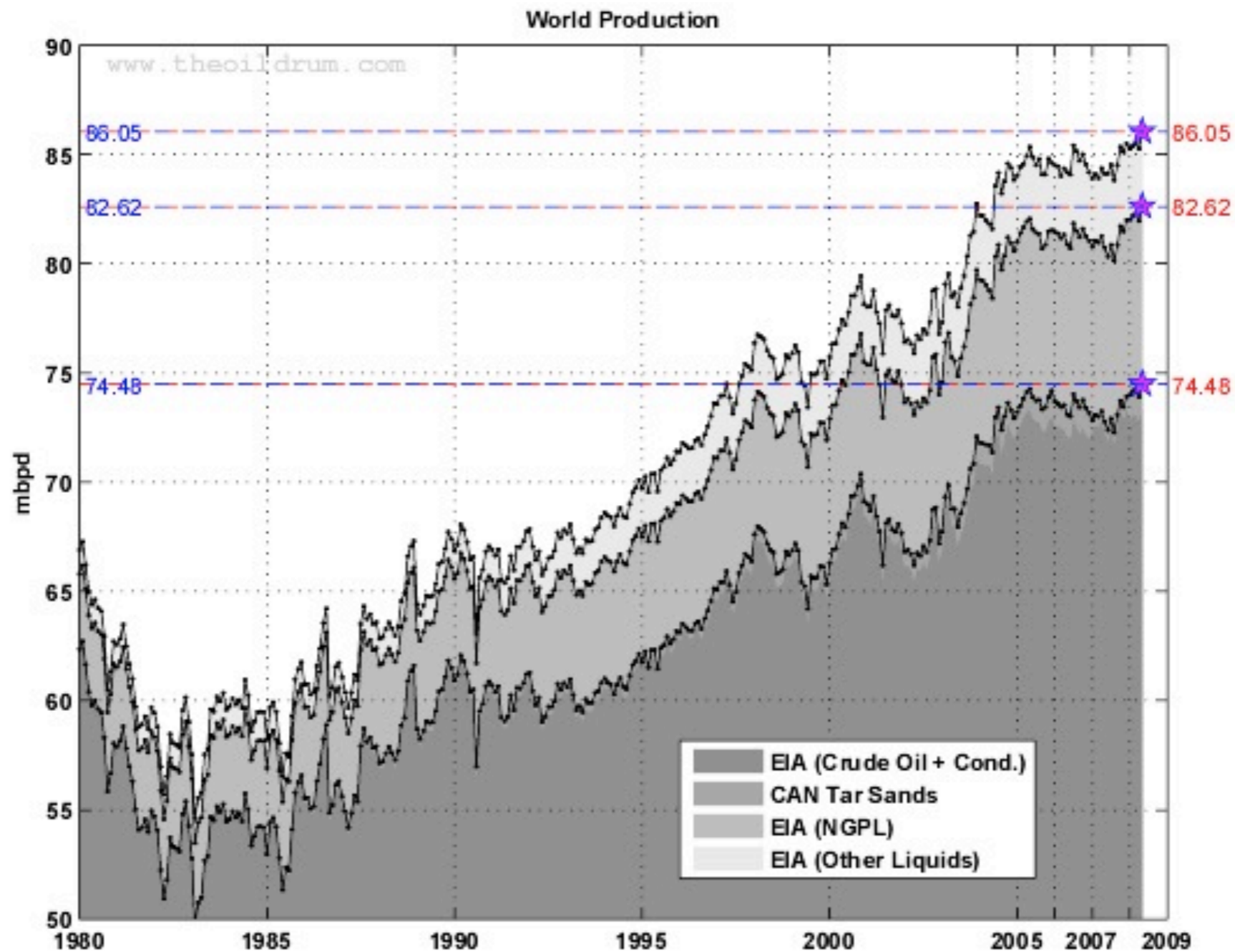
- Millions shifting from farms to factories
- China needs to grow at 10% a year to provide jobs
- Increasing oil imports are necessary for this growth



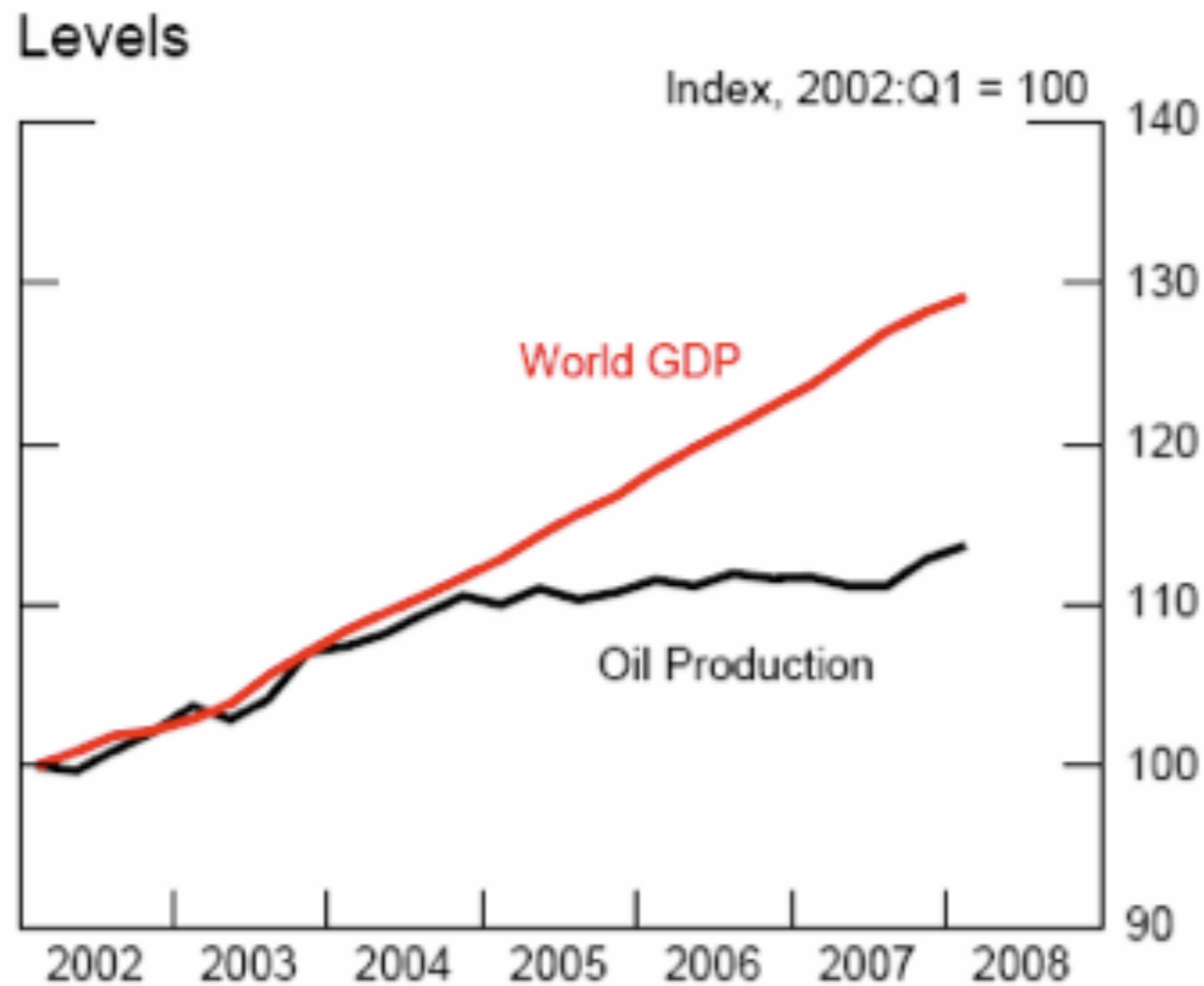
# Oil Discoveries Peaked in 1964



# Oil Production Has Been Flat Since 2005

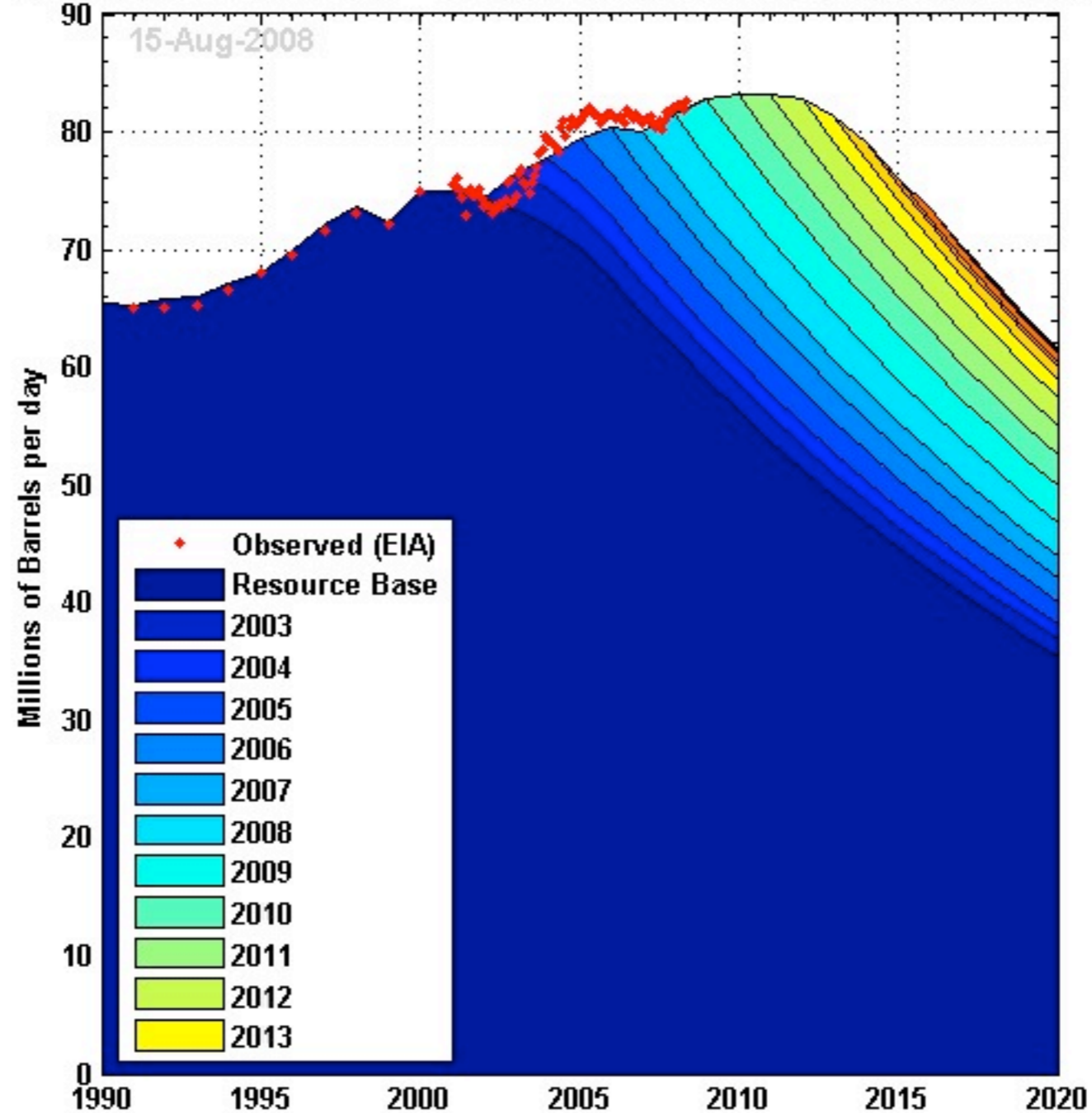


# Peak Oil Problem



# Future Oil Production

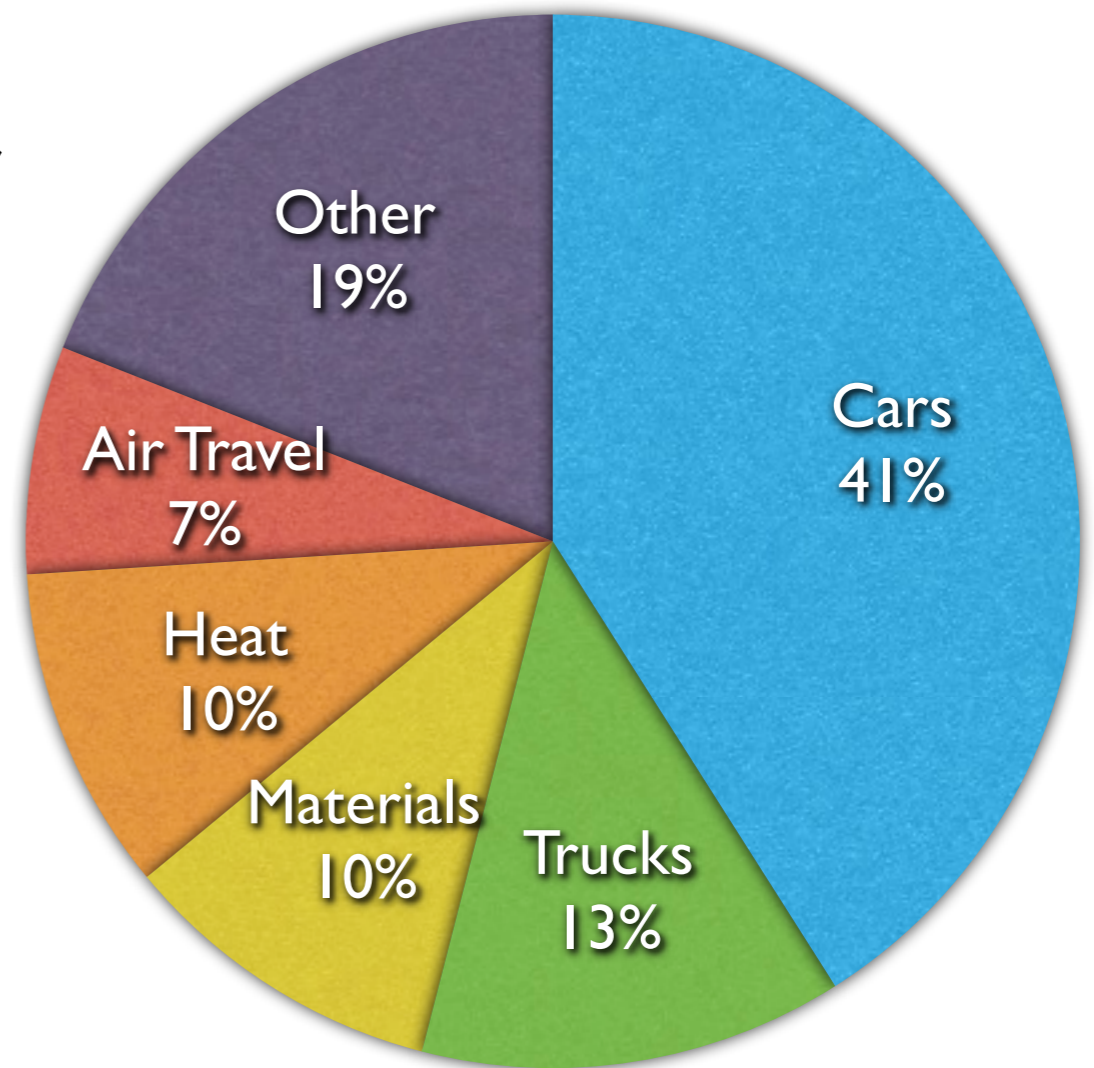
World Oil Supply (Crude Oil + Natural Gas Liquid) and Megaproject Contributions



# Electric Vehicles to the Rescue

# Oil Usage in the US

41% of oil is used in cars for personal transportation



# EV Oil Savings

- EVs can save from 2.0 to 3.7 million barrels per day
- Equals imports from Saudi Arabia, Nigeria, Venezuela and Russia



**EVs Are Coming**

# Toyota RAV4-EV

- Introduced in 1997
- Range of 100 miles
- 72 MPH top speed
- Offered for sale in 2003 and many still exist
- Batteries can last 150,000 miles
- RAV4-EV owners have high levels of satisfaction



# Tesla Roadster

- 0-60 in 4 seconds
- 230 mile range
- 125 MPH top speed
- \$100,000+
- Shipping now, wait list



# Plug-in Hybrid (PHEV)

- Same as regular hybrid but bigger battery
- Can operate solely on battery for a limited distance
- Blended efficiency of 100 MPG
- Hymotion conversion available now
- Factory PHEVs available in 2009



# Chevy Volt

- Series hybrid
- 40 mile all electric range, 600 mile extended range
- 0-60 MPH 8 seconds
- 120 MPH top speed
- Probably \$40,000
- Available 2010



# Other Upcoming EVs

- Miles XS500
- Smart EV
- TH!NK
- Tesla Whitestar
- Mitsubishi iMiEV
- Nissan GT 2012
- Tata Indica EV
- REVA
- Dynasty iT



# Conclusion

- Peak oil is close
- EVs can reduce oil usage
- EV technology is ready
- EVs are coming

**Why Presidio MBA?**



PRESIDIO  
SCHOOL OF MANAGEMENT



# Presidio MBA

- Want to start a company that will make a difference in the world
- Sustainability will be absolutely necessary to successful businesses
- Excited about learning more about running a sustainable business
- Want to be around people passionate about sustainability

# Thank You!



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