

1.5 Hour PowerPoint Presentation

Civilization vs. the Oil Age

A MOST CRITICAL SUBJECT

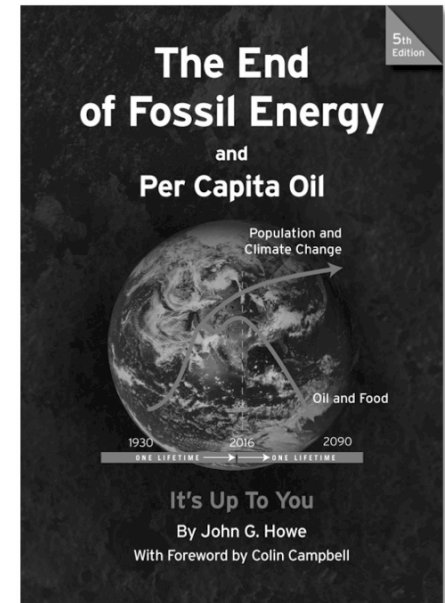
1

Excerpts from the new book

The End of Fossil Energy and Per Capita Oil
(FIFTH EDITION)

Available at
amazon

This book is available directly from the author,
John Howe by email at: howe@megalink.net
or our websites www.solarcarandtractor.com and
www.PerCapitaOil.com



Oil is a Most Important Natural Resource and Absolutely Fundamental to Industrialized Civilization

2

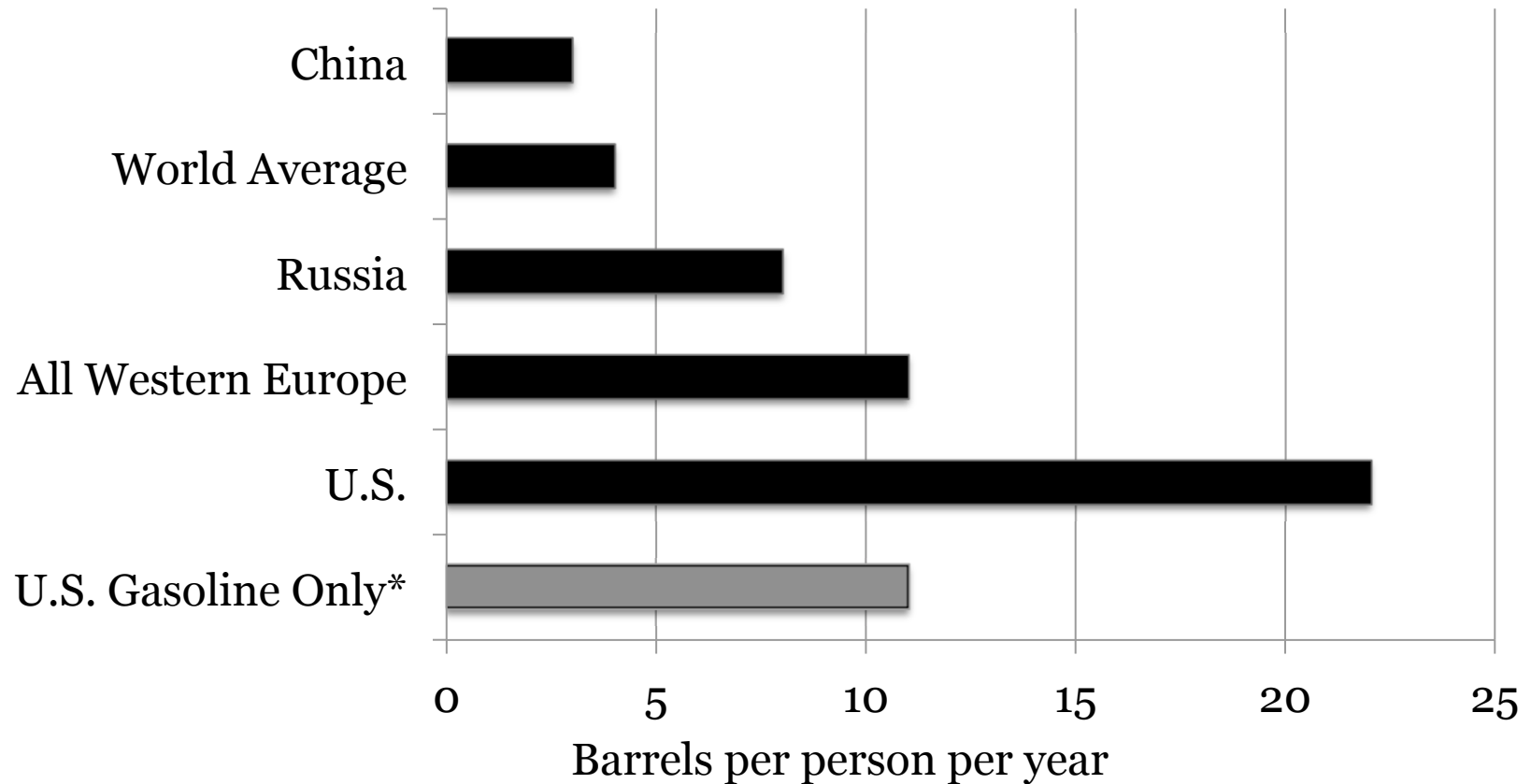
Oil is finite and non-renewable.

Oil provides the basic energy source for:

- food for seven billion people.
- most of the energy for modern transportation.
- support of other energy sources.
- raw materials for plastics and lubricants.

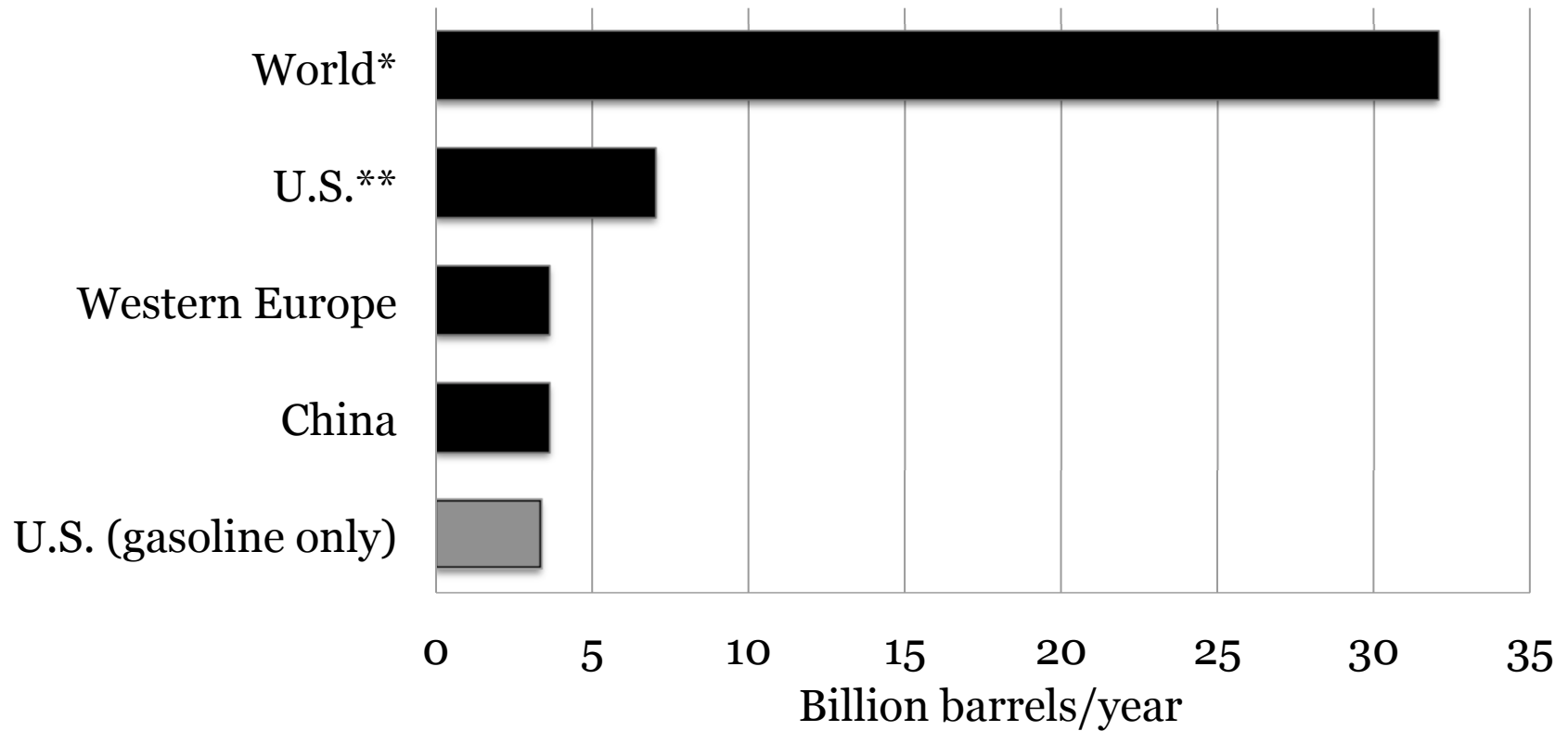
World Per Capita Oil Use

3



** In the U.S. we consume more gasoline (to drive three trillion miles each year) than other countries consume in total combined oil.*

World Annual Oil Use

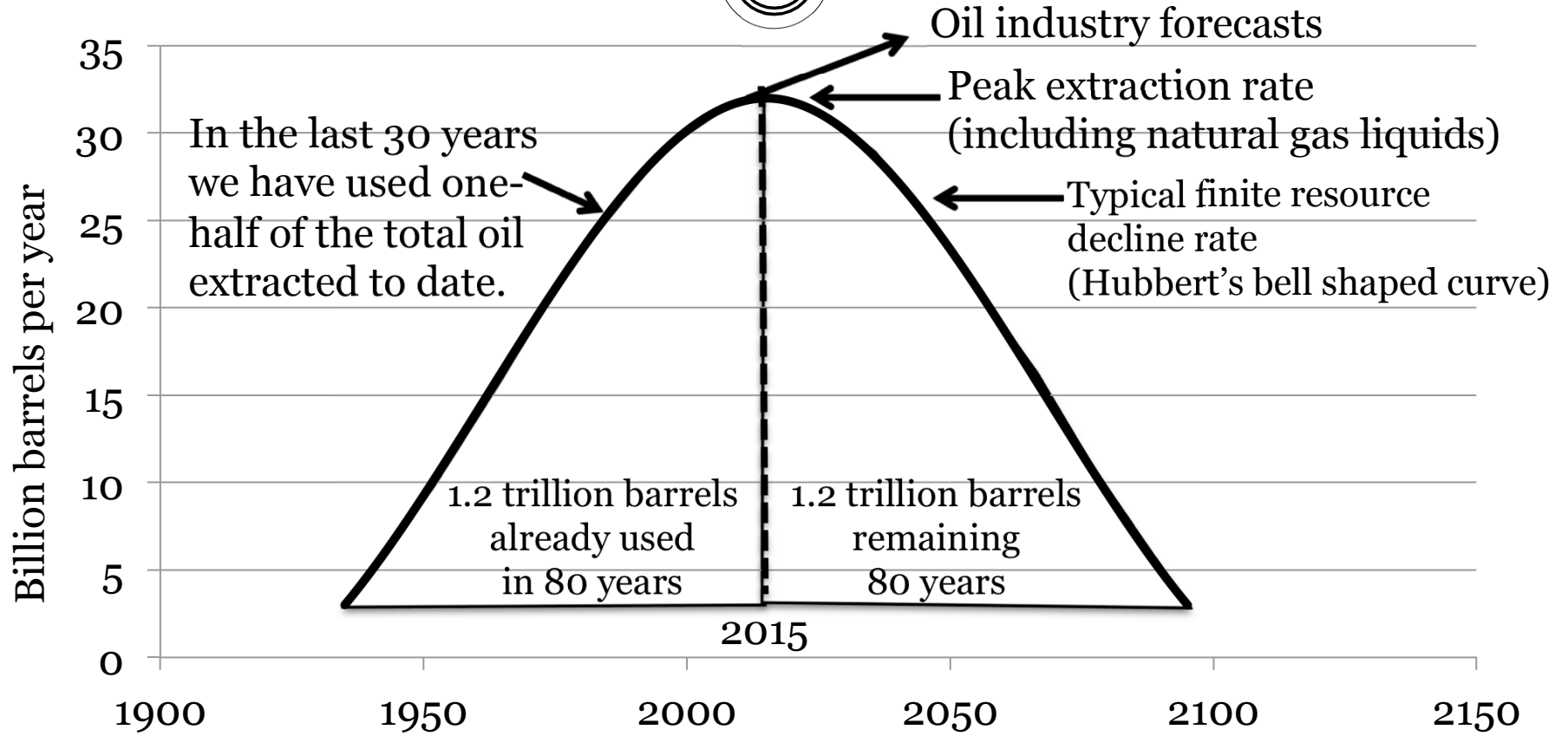


** The world uses one billion barrels of oil every 11 days.*

*** In the U.S. we use approximately $\frac{1}{4}$ of the world total oil consumption and one-half of that for gasoline*

The World Oil Age

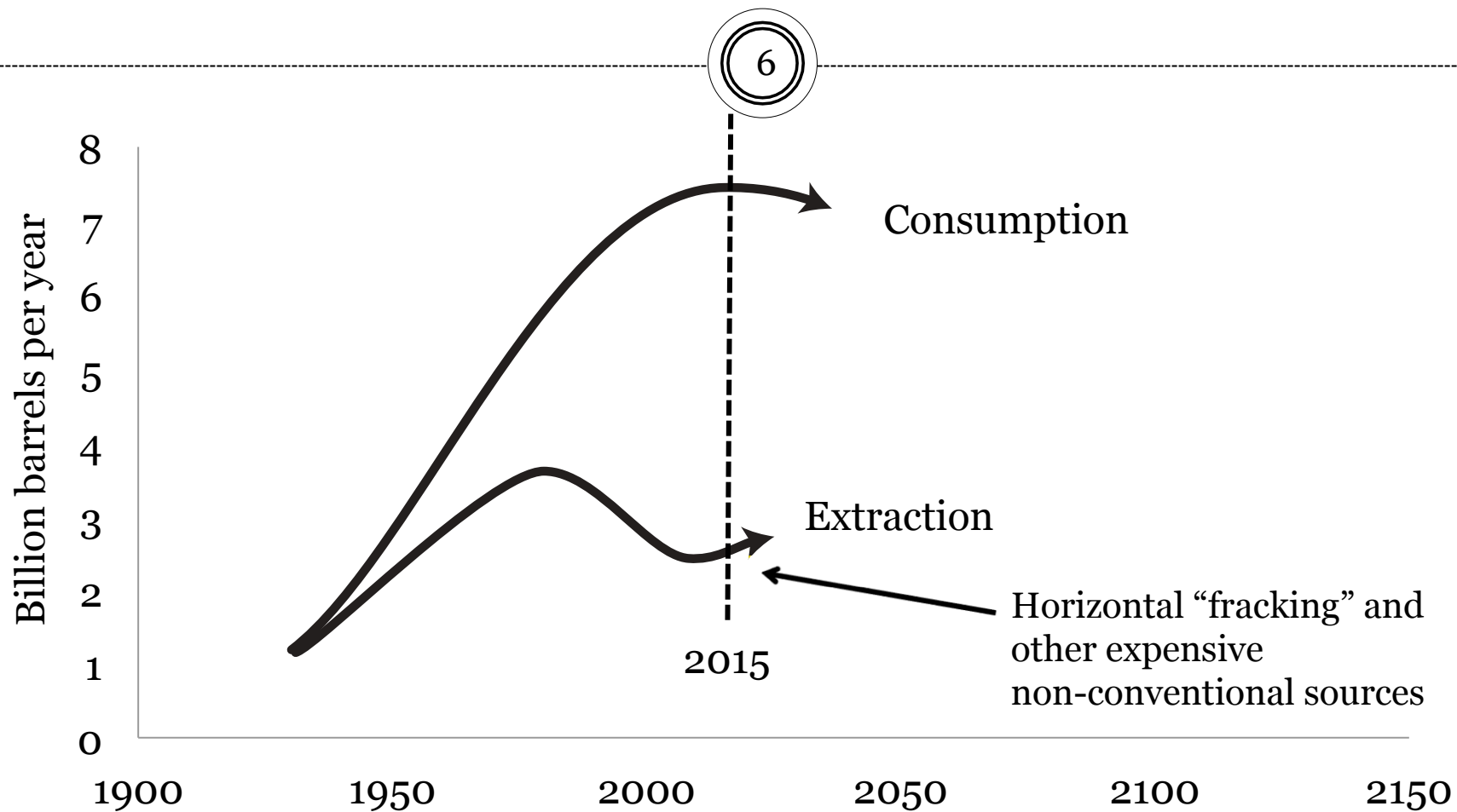
IN TWO 80 YEAR LIFETIMES



In the span of two lifetimes we will have used almost all of the oil reserves in the world.

The U.S. Oil Age

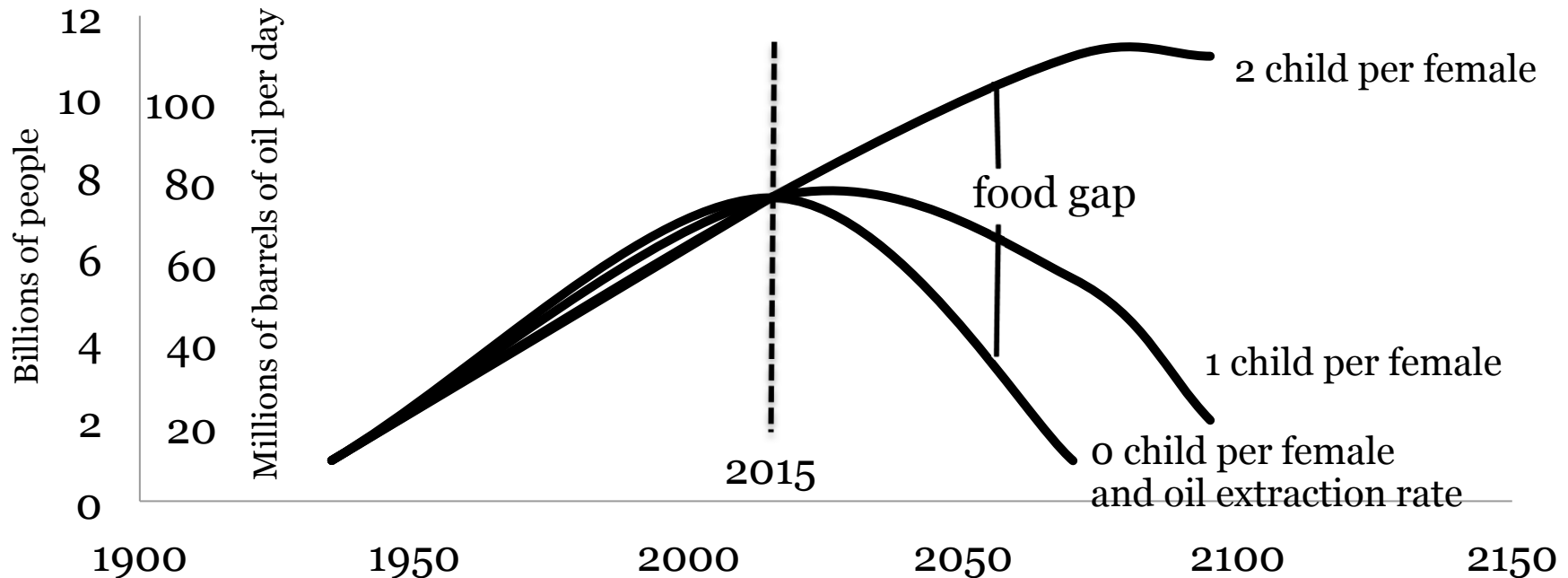
IN TWO 80 YEAR LIFETIMES



U.S. consumption rate grew while our extraction rate (including fracking and nonconventional) declined and recovered.

World Population Growth

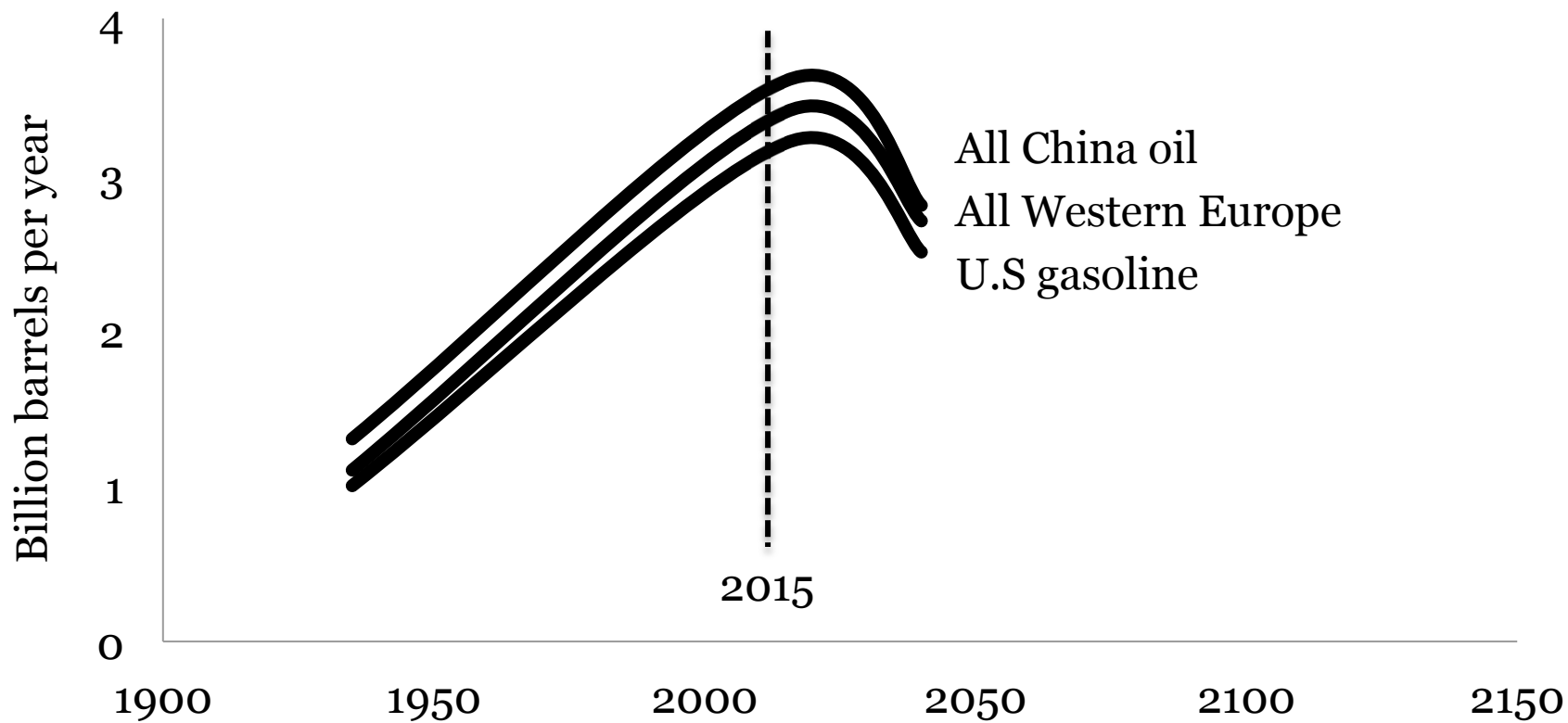
IN TWO 80 YEAR LIFETIMES



The present world population growth rate is still over 2 children per female. Even if we reduce the growth rate to 1 child per female we still have a food gap between the global availability of oil and the number of people who need it to survive.

Focus on U.S. Gasoline Consumption

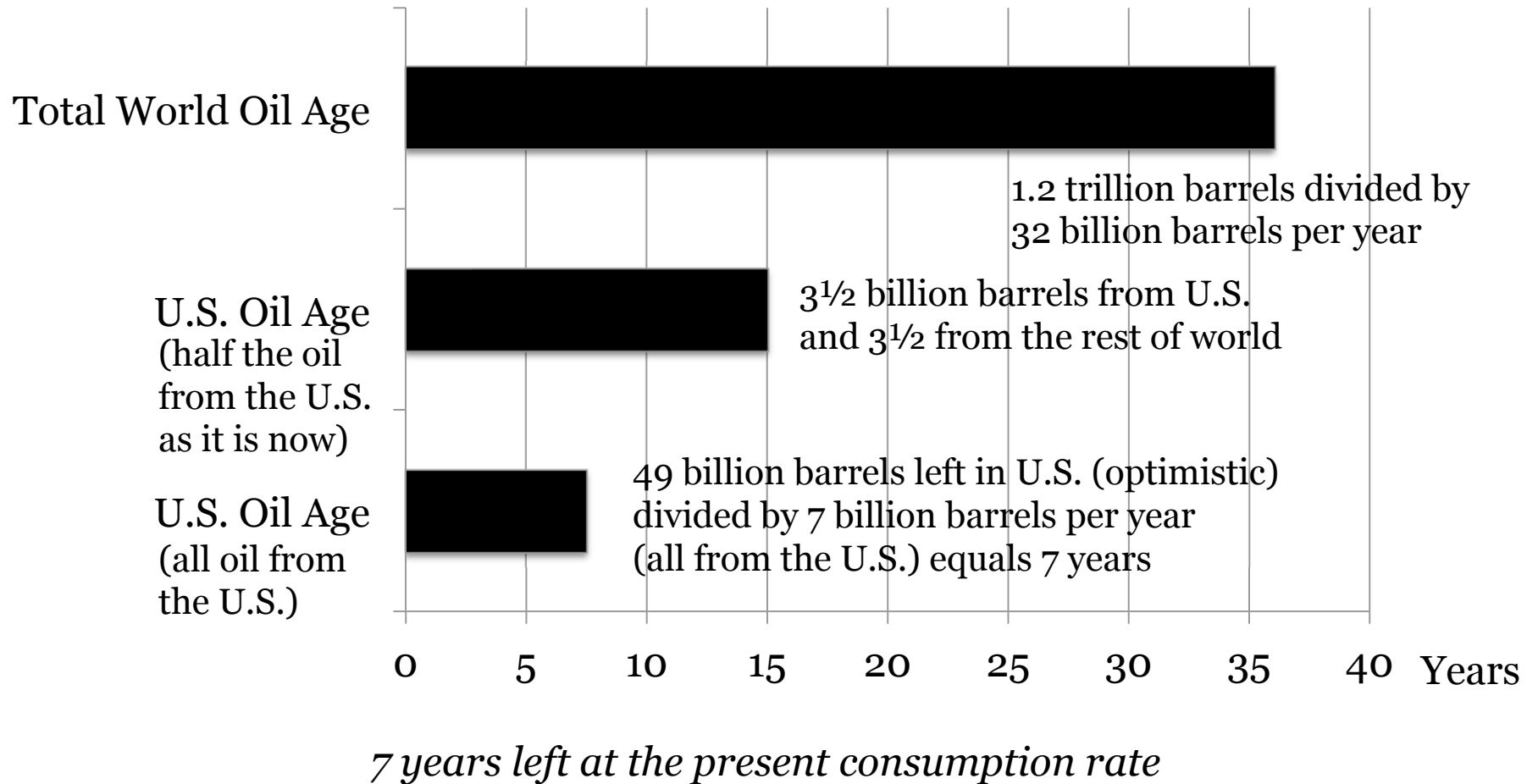
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In the U.S. we consume as much gasoline as China's total oil consumption.

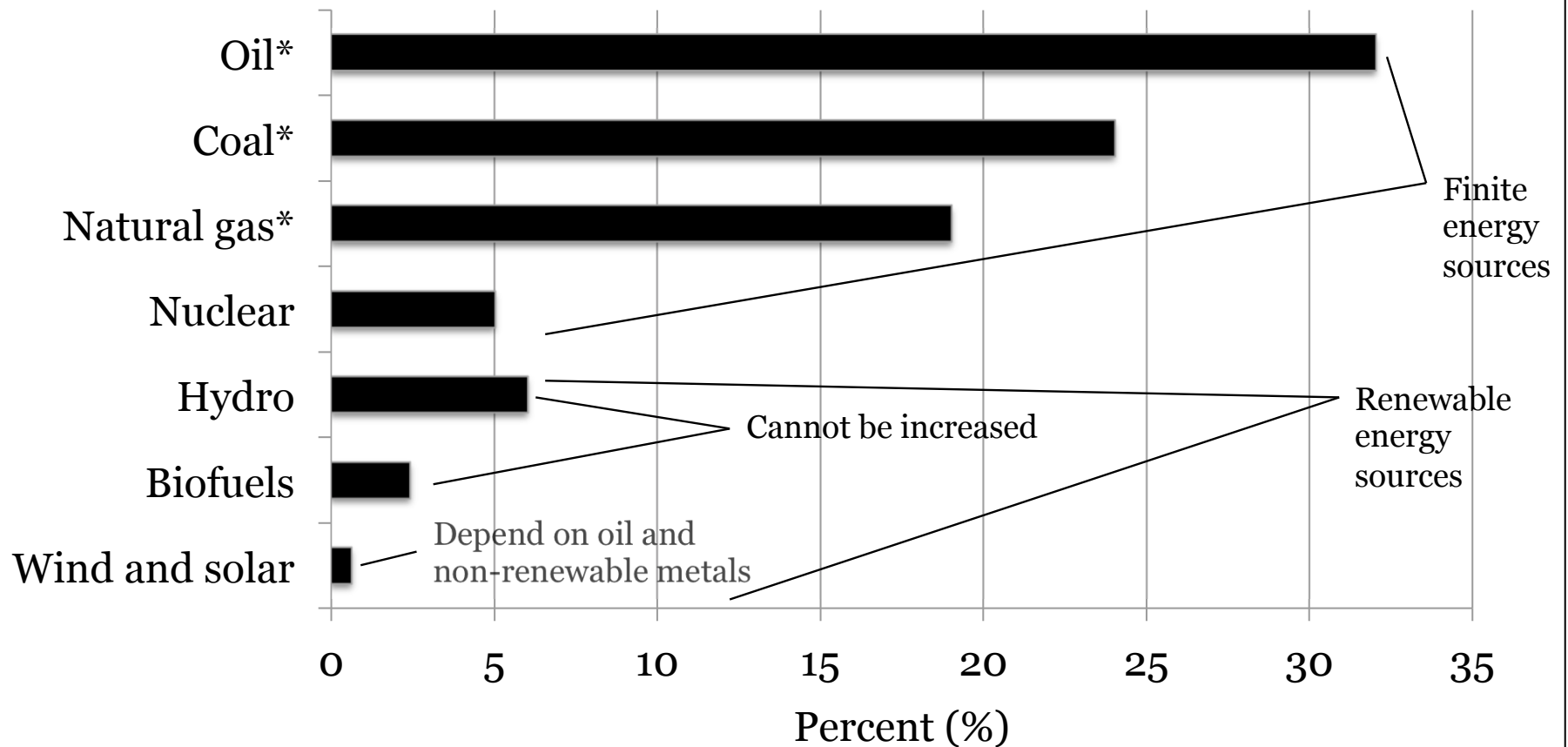
Time Remaining in the Oil Age

9



Percent of All World Energy

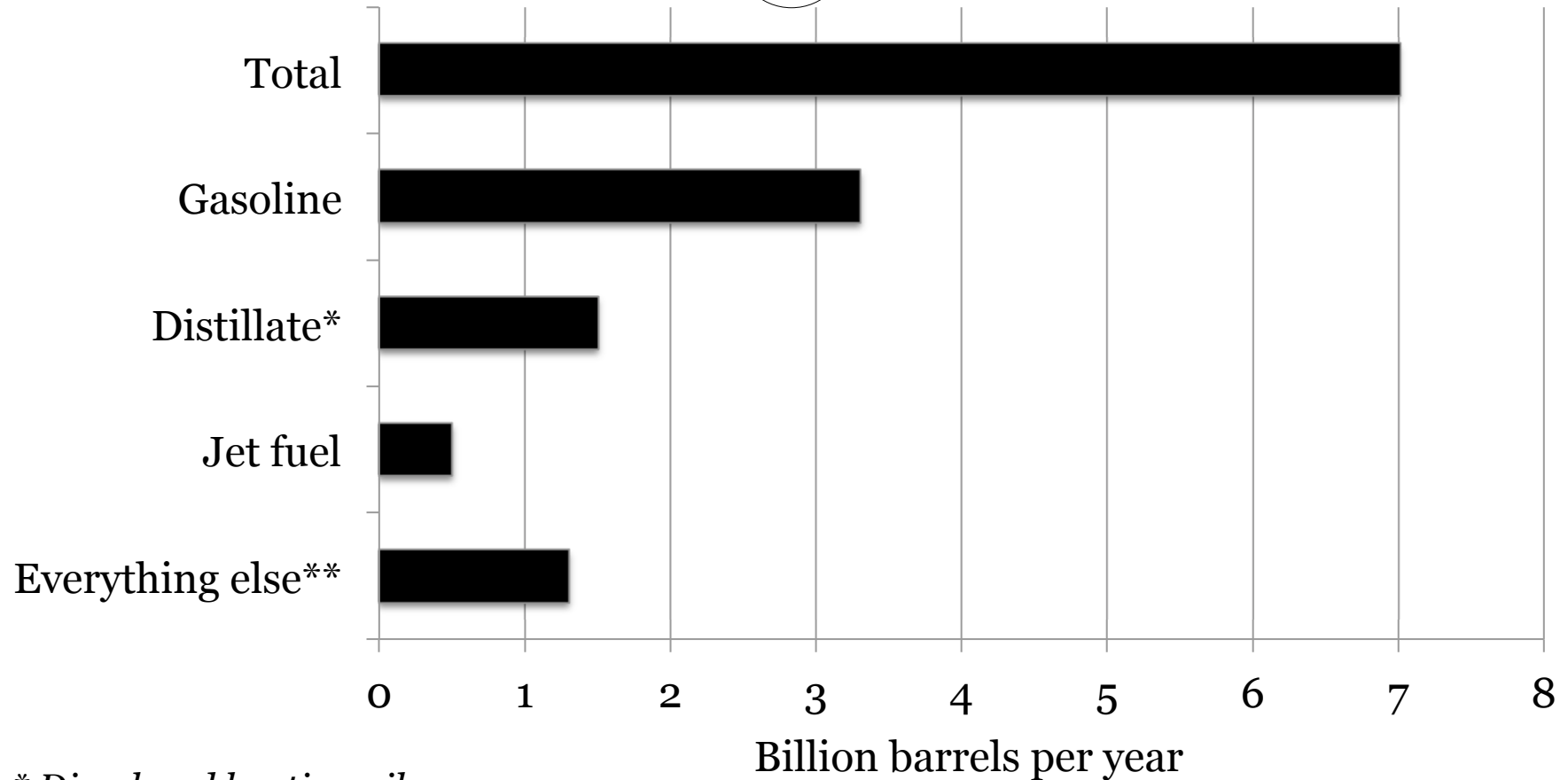
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* Oil, coal, and natural gas are finite and contribute to elevated levels of greenhouse gas.

U.S. Liquid Fuel Consumption

11

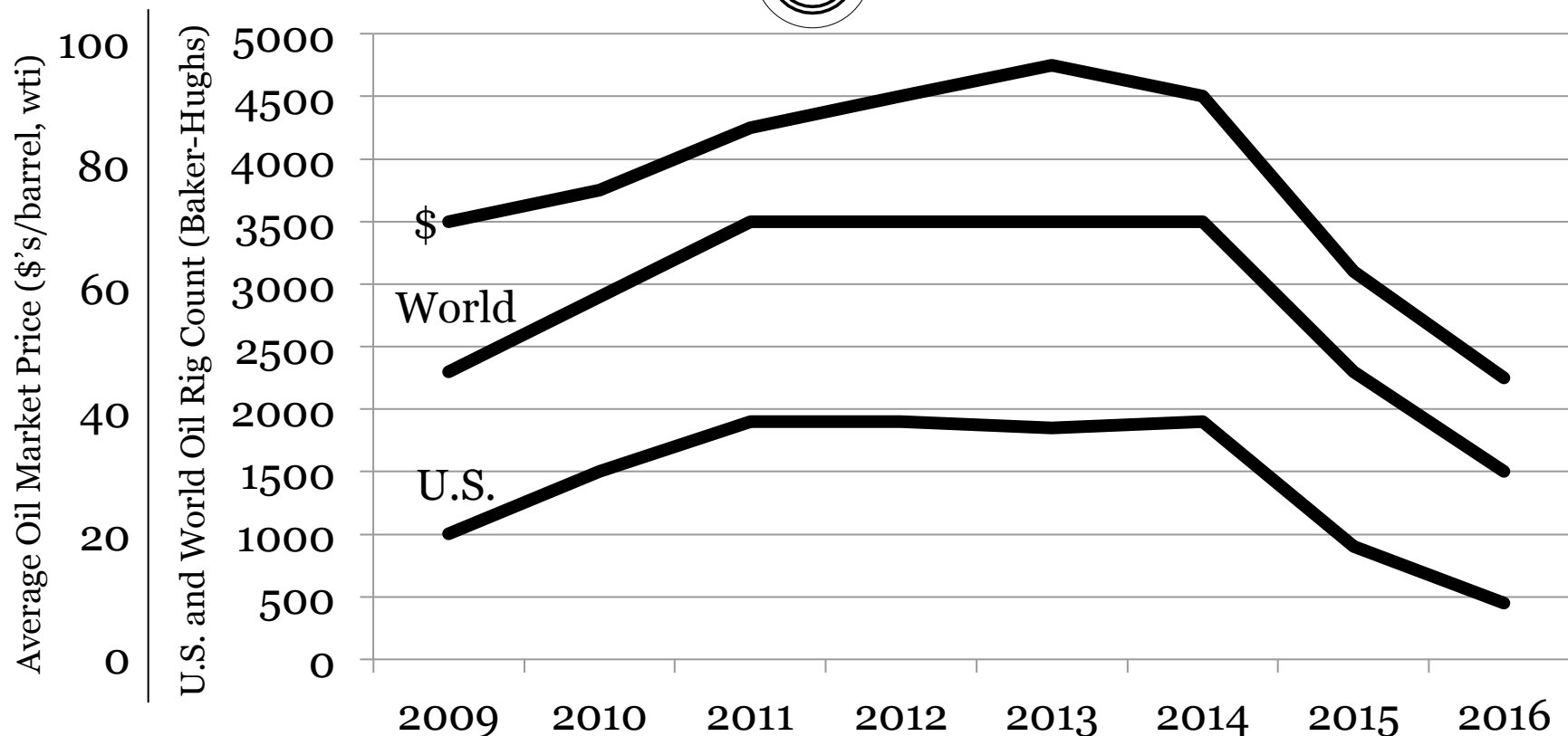


* Diesel and heating oil.

** Including support of other energy sources.

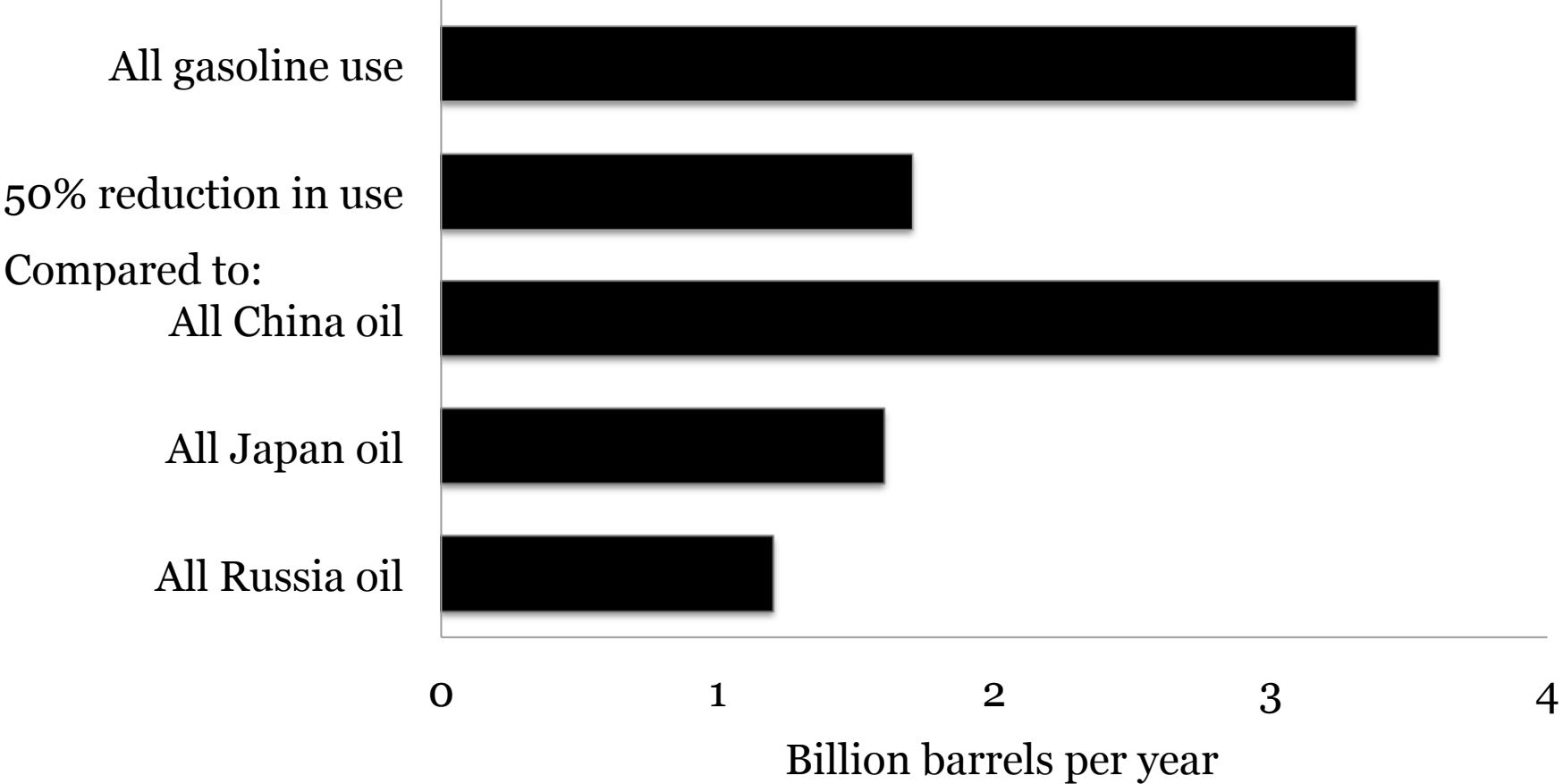
Lower Price Leads Decline in Production

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- *Lower price stimulates demand but discourages supply.*
- *After ten years of increasing oil prices and consumer debt, insufficient U.S. wealth remains to support sustained recovery and high price.*

The Case for 50% Gasoline Rationing



Other Positives for Gasoline Rationing

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- Consumption of 400 million gallons per day.
50% reduction to 200 million gallons per day.
- 200 million gallons per day \times \$3 per gallon =
\$600 million per day or \$0.22 trillion per year back into economy.
- Gasoline rationing would encourage mass transportation,
electric cars, and bicycles.
- Gasoline rationing would lower the cost of oil for other needs.
- Gasoline rationing electronic swipe cards could be saved or sold.

Gasoline Rationing vs. all CO₂ Sources

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World total: 36 billion metric tons per year

1/3 from China: 10.5 billion tons

1/7 from U.S.: 5.3 billion tons

U.S. coal: 1.7 billion tons

U.S. natural gas: 1.4 billion tons

U.S. liquid fuels: 2.2 billion tons

(including U.S. gasoline 1.1 billion tons)

50% gas rationing reduction =
0.5 billion metric tons per year

= 5% of all China's or 10% of all U.S. CO₂ emissions

Other Directly Related Issues

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The following chapters refer to the book The End of Fossil Energy and Per Capita Oil

Chapter 3

- A call for personal involvement
- Educate yourself, see Bibliography, websites
- Join mass movements
- Get into gardening
- Have a stand-alone solar survival system

Chapter 5

- A solar electric future, potential and limitations: cars, tractors, airplanes?? 18 wheelers??
- Battery storage, weight, recycling??
- Cost and hazards of lithium

Other Directly Related Issues (continued)

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Chapter 6

- Population and immigration demographics

Chapter 8

- Food availability on world, national, local, and personal scales

Chapter 9

- Localization, transition, resilience movements

Chapter 10

- The end of economic growth

Chapter 11

- The desperate need for decisive leadership
- Autocracy vs. democracy? (Plato's "philosopher king")

Conclusions

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- Our civilization is at the tipping point.
- Seriously question the future of a child born today.
- Climate change is a longer-term and therefore less serious problem.
- Please help network these thoughts.

John Howe

www.solarcarandtractor.com

www.PerCapitaOil.com

You tube.com/Howe Triple Crisis