



Energy Price Outlook

United-ICAP

Walter Zimmermann



Energy Price Outlook

1. Nature of the Markets
2. Oil Speculators
3. Oil Subsidies
4. Long Term Fundamentals
5. Long Term Technicals

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Walter J. Zimmermann Jr. e-mail: walterz@united-icap.com

Outlook for
Energy Prices



*The Best Prophet
of the Future
Is the Past*

- Chinese fortune cookie



*History teaches everything,
including the future.
- Lamartine, 1850*



Energy Price Outlook Topics

1. Nature of the Markets

Whoever wishes to foresee the future must consult the past;
for human events ever resemble those of preceding times.

This arises from the fact that they are produced by men who
ever have been, and ever shall be, animated by the same
passions, and thus they necessarily have the same results.

- Nicollo Machiavelli 1469 - 1527

Those cannot remember the past

Are condemned to repeat It.

- George Santayana, 1905

*We learn from history that we never learn
anything from history.*

- Hegel, 1815

Summary:

Future = (f) Past

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Outlook for
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The Market for Energy Prices



is a Tug of War ...

*The Market for Energy Prices
is a Tug of War Between*

*There is
enough
energy
today*

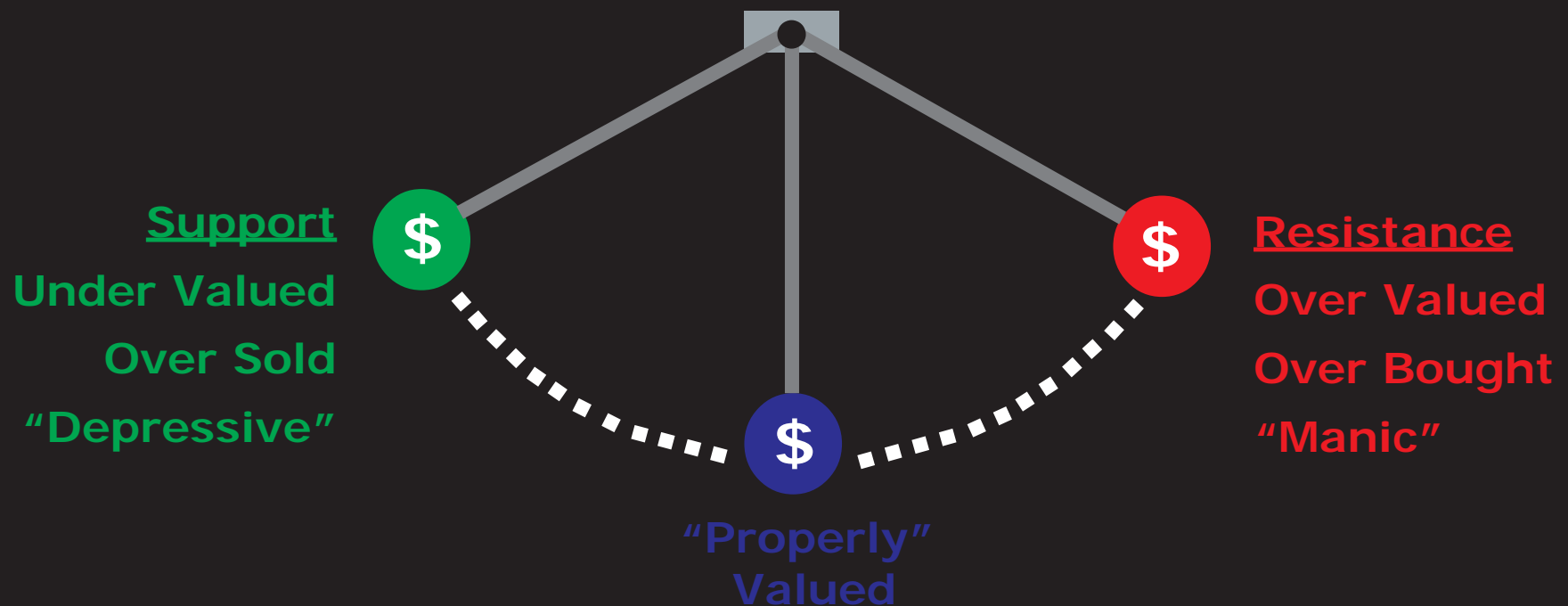
**The
Price**

*There may
not be
enough
tomorrow*

Rallies in Energy Prices are **FEAR** based.

Stock Market Rallies are **HOPE** based.

The pendulum of the market price



The price quickly passes through "properly valued"
on its way from **over-valued** to **under-valued**

Maximum Hope:

Enough Energy

Under Valued

Over Sold

Bottoming

Support

"Depressive"

Maximum Fear:

May Not Be Enough

Over Valued

Over Bought

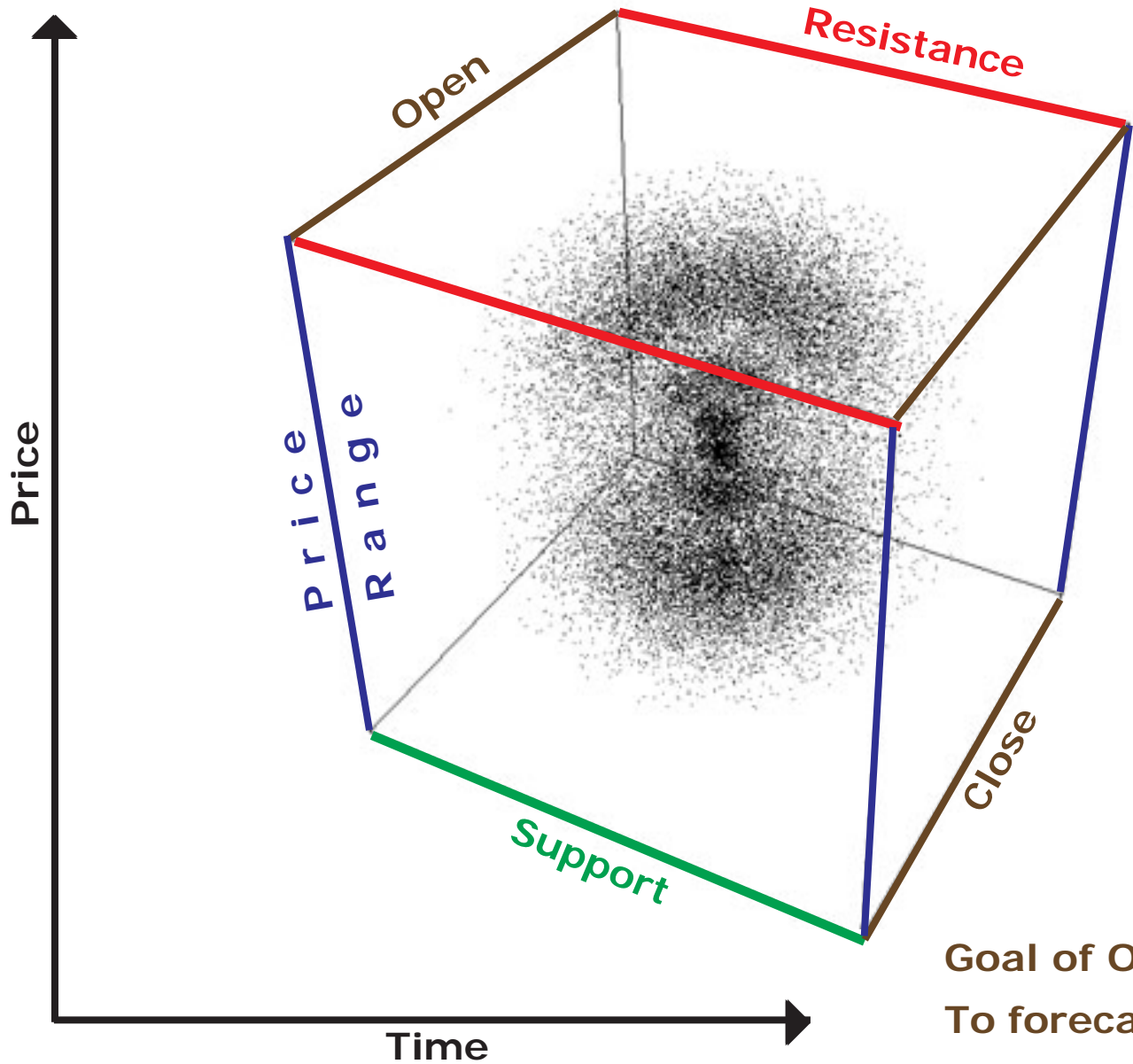
Peaking

Resistance

"Manic"



Market Price:
Consensus Opinion



Goal of Our Analysis:
To forecast the price range
for a given time span

Fundamental Analysis

forecasts trends in supply and demand
but cannot forecast price targets

Technical Analysis

forecasts price trends

But cannot predict the fundamentals

Price Trend Drivers

Externals:

- Supply
- Demand
- Geopolitics

Fundamentals

Internals:

- Momentum
- Sentiment
- Cycles

Technicals

Market Fundamentals + Emotional Content = Price

Technical Analysis Studies the Price Action

Message:

**The Price Action is a better predictor of
price trends than the Fundamentals**



Energy Price Outlook Topics

1. Nature of the Markets
2. Oil Speculators

Governments Blame Speculators for Chronic Economic Problems



- **Year: 1997**
- **Malaysian officials blame speculators, especially George Soros for the contraction known as 'the Asian contagion.'**

Real Causes:

- **Serious weakness in the Asian financial systems**
- **Grossly inadequate supervision and management of risk**
- **Lack of transparency in accounting**
- **Excessive short term debt**

Aftermath of Contagion:

- **Problems addressed, more stable and sustainable economic expansion**

Governments Blame Speculators for Chronic Economic Problems



- **Date: 16 Sept 1992**
- **British officials blame speculators, especially George Soros for forcing a devaluation of the Pound**

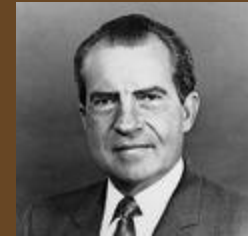
Real Causes:

- High German interest rates to combat inflationary effects of the high cost of German reunification
- Rapid Depreciation of the US Dollar
- High Pound interest rates (12 then 15%) induced a recession

Aftermath of Devaluation:

- A booming British economy

Governments Blame Speculators for Chronic Economic Problems



- **Date: 15 Aug 1971**
- **Nixon ends convertibility of US Dollar to Gold, blaming speculators**

Real Causes:

- Very high US budget and trade deficits
- Excessive printing to paper dollars to pay for military spending
- Global loss in confidence of the ability of the US to address its deepening economic problems

Aftermath of ending Bretton Woods:

- All worlds major currencies were floated allowing true value of each nations economy to be reflected in its relative currency value

Governments Blame Speculators for Chronic Economic Problems

- **Years: 1918 to 1953**
- **Lenin and Stalin repeatedly blame speculators for the economic problems of communism in general and the Soviet Union in particular**

Real Causes:

- Too numerous to list

Aftermath:

- Eventual collapse of Soviet Union



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Walter J. Zimmermann Jr. e-mail: walterz@united-icap.com**Outlook for
Energy Prices****Governments Blame Speculators
for Chronic Economic Problems****Cost of a loaf of bread in Berlin****1915: .63 Marks****1922: 163 Marks****Jan 1923: 250 Marks****Jul 1923: 3,465 Marks****Sep 1923: 1,512,000 Marks****Nov 1923: 580,000,000,000 Marks****burning Marks cheaper than buying coal**

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Walter J. Zimmermann Jr. e-mail: walterz@united-icap.com**Outlook for
Energy Prices****100 trillion Mark Note****Nov 1924****Weimar Republic Hyperinflation****Background**

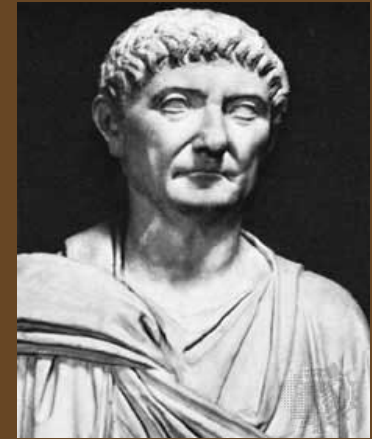
- Germany abandoned backing the Mark with Gold in 1914
- Inflation takes off during WWI as Germany finances war with debt
- Total of debt payments from WWI and with reparations payments exceeds total GDP
- Monetizing the debt seemed the only way forward
- By the peak of hyper-inflation in November 1923 over 30,000 printers at almost 1800 presses across Germany were running 24 hours a day printing currency notes
- By November 1923 the exchange rate of German Marks to the US Dollar was one trillion to one
- 100 trillion Mark notes were in circulation

Blame Game

Many, including the Weimar finance minister and Adolf Hitler blamed currency speculators for the financial collapse

Governments Blame Speculators for Chronic Economic Problems

- **Date: 301 A.D.**
- **Emperor Diocletian blames “the avarice of merchants and speculators, their extortion and inhumanity”**



Real Causes:

- In need of funds Diocletian slashes the silver content of Roman coins.
- This currency devaluation unleashes a tidal wave of inflation.
- In an attempt to reign in the inflation Diocletian institutes wage and price controls with death as the penalty for over-charging.

Result of Edict of 301 A.D.

- Edict is ignored, shortages are widespread, black markets thrive, the empire is further weakened

Governments Blame Speculators for Chronic Economic Problems

- **Date: 386 B.C.**
- **Athens blames traders for the high price of grains**

Real Causes:

- Athens must import most of its grain requirements
- Naval force incapable of protecting grain imports
- Government lacks political will to implement a solution

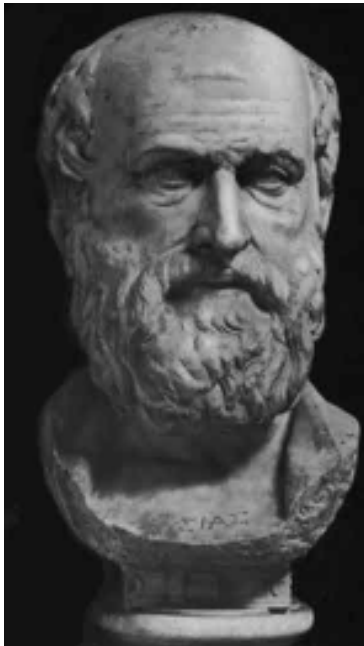
Aftermath:

- Athens remained weak. Inability to provide leadership to other city states allows Philip of Macedonia to conquer Greece



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Walter J. Zimmermann Jr. e-mail: walterz@united-icap.com**Outlook for
Energy Prices****Lysias, 445 to 380 BC Ancient Greek Orator**

On Grain traders, 386 B.C.

For their interests are the opposite of other men's: they make most profit when on some bad news reaching the city, they sell their grain at a high price. And they are so delighted to see your disasters that they either get news of them in advance of anyone else, or fabricate the rumour themselves; now it is the loss of your ships in the Black Sea, now the capture of vessels on their outward voyage by the Lacedaemonians, now the blockade of your trading ports, or the impending rupture of the truce; and they have carried their enmity to such lengths that they choose the same critical moments as your foes to over reach you."

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Walter J. Zimmermann Jr. e-mail: walterz@united-icap.com**Outlook for
Energy Prices****Background**

- Ancient Athens embarks on campaigns of conquest.
- City grows in influence and size, population explodes
- Soil quickly exhausted
- Athens must import most of its grain requirements
- Brutality of conquests have made it many enemies
- Naval forces must accompany grain shipments
- Shifting alliances and frequent droughts make grain supply unreliable and shortages become commonplace
- Athenian empire is over-extended militarily and economically
- Athens attempts to conquer city of Syracuse and island of Sicily in 415 to 413 B.C.
- Athenian forces crushed, entire army lost, entire fleet destroyed
- Without a navy to protect them the grain imports vanish
- in 405 B.C. Sparta allies with Persian and destroys the remnants of Athenian fleet
- In 404 B.C. Athens is blockaded by sea. After three months of starvation Athens falls and never rises again

Lesson for History

- If you are dependent on imports for critical requirements
you must have the dominant military force

Ignorance, Mis-Direction, and Evasion - blaming speculators for energy prices -

- **In every case of speculators being blamed for economic woes the real causes were deeply rooted structural weakness**
- Blaming markets for their message is like blaming the a fire alarm for starting the fire
- This reality is on full display in the recent politically motivated attacks on 'oil speculators' and 'short sellers.'



Ignorance, Mis-Direction, and Evasion - blaming speculators for energy prices -

- **Never mind that the United States with 4% of the world's population consumes 25% of the world's energy. Blame speculators.**
- Never mind that explosive demand in India and China has erased OPEC surplus production. Blame speculators.
- Never mind that the US lacks the political will to implement a long term energy policy. Blame speculators.
- In an election year when political pandering is already at flood stage, blame the speculators.



Energy Price Outlook Topics

1. Nature of the Markets
2. Oil Speculators
3. Oil Subsidies

Countries with Oil Subsidies**By \$ Amount**

Country	Subsidy
• China	40 bil plus
• Iran	30 bil plus
• Indonesia	20 bil plus
• Malaysia	15 bil plus
• India	13 bil plus
• South Korea	10 bil plus
• Venezuela	9 bil plus

As Percent of GDP

Country	% GDP
• Iran	15.0%
• Malaysia	7.5%
• Indonesia	4.0%
• Venezuela	4.0%
• India	3.0%
• South Korea	1.0%
• China	1.0%



**Other Countries that Subsidize the Price of Oil:
Burma, Egypt, Kuwait, Mexico, Nigeria, Saudi Arabia,
Syria, Trinidad and Tobago, Vietnam**



Oil Subsidy Facts

- Countries with oil subsidies accounted for **96% of the increase** in world oil use in 2007 (source: BP)
- Fully **half of the world's population** buy subsidized fuel (source: Morgan Stanley).
- So **25% of the world's oil** is sold at below market prices
- These subsidies **largely benefit the rich** (source: IMF)
- The 20% richest households get 42% of the fuel subsidies
- The 20% poorest households get less than 10% of the subsidies



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**Outlook for
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So these subsidies are to blame for the high price of oil?

'No wonder demand did not go down when the price went up'

However...

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Energy Prices**

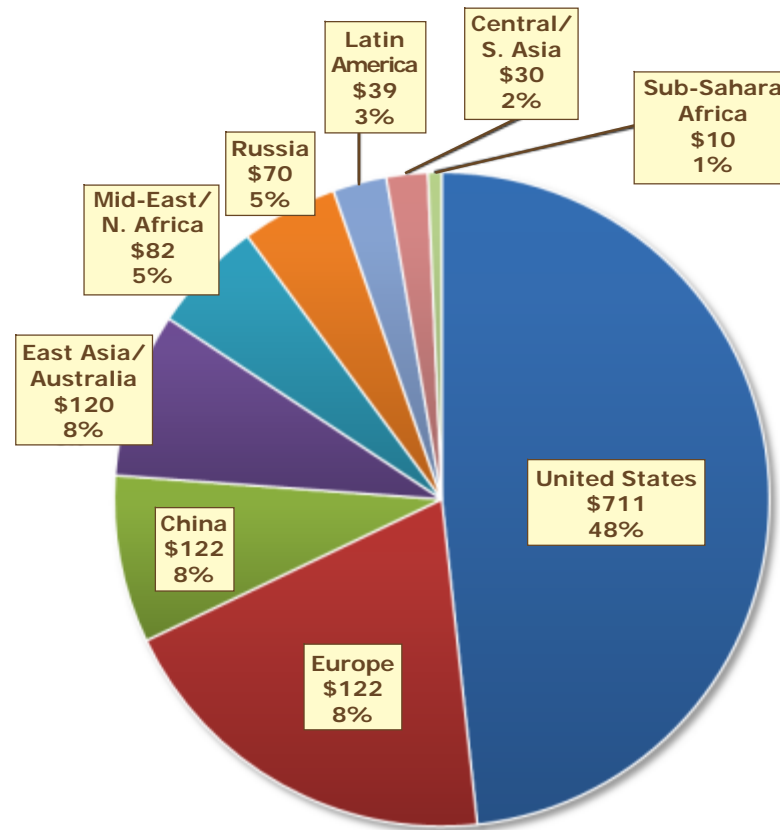
**The United States pays the largest oil subsidy bill
and has been doing so for decades...**

**The United States is the world most prodigious
energy consumer
and has been so for generations...**

US Military Spending vs. The World, 2008

(in billions of US dollars and % world total)

2008 Total Military Spending: \$1.473 Trillion



Source: Center for Arms Control and Non-Proliferation

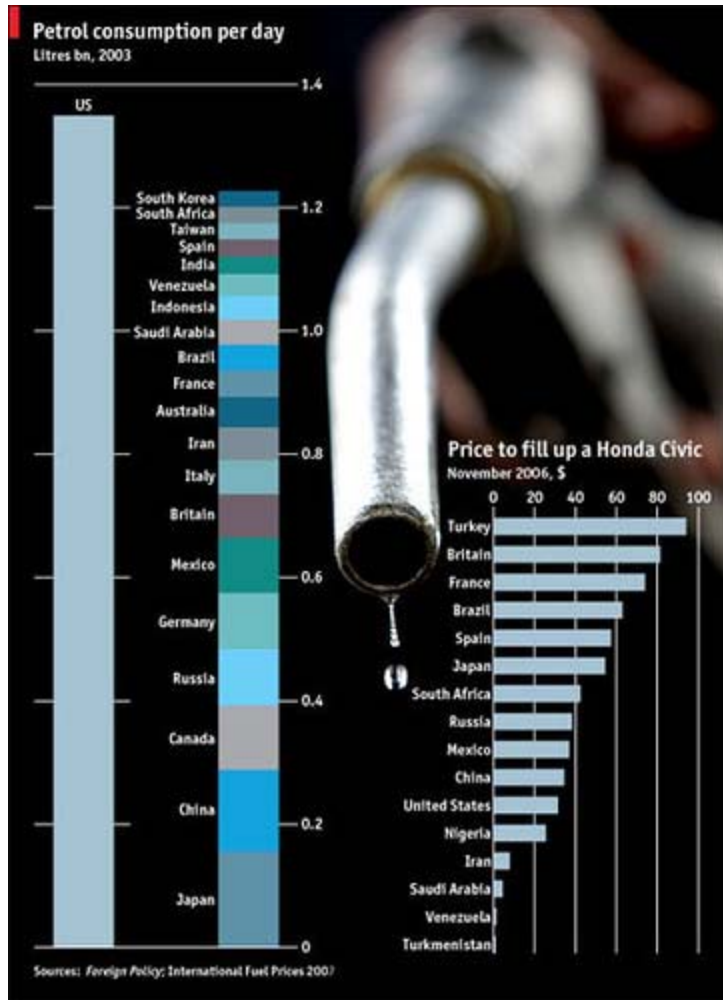
1. The United States military budget subsidizes the geo-political price risk of energy prices.
2. The US military budget is a tranfer payment.
3. Instead of paying the full geo-political risk price of energy we pay the US military to stabilize geo-political risks.
4. The US military, as presence, capability, and threat serves to subsidizes the true price of oil.
5. The US military's success in stabilizing the price has acted to spur global demand for energy.

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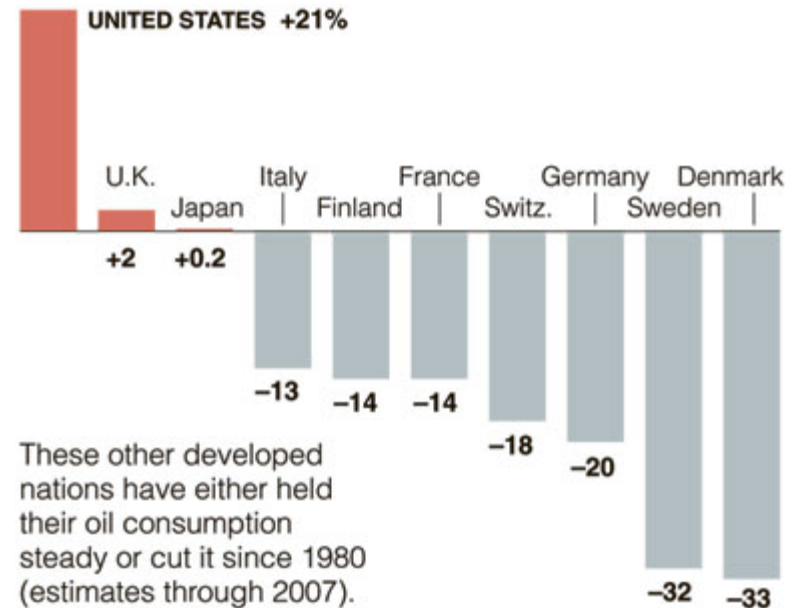
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Outlook for Energy Prices



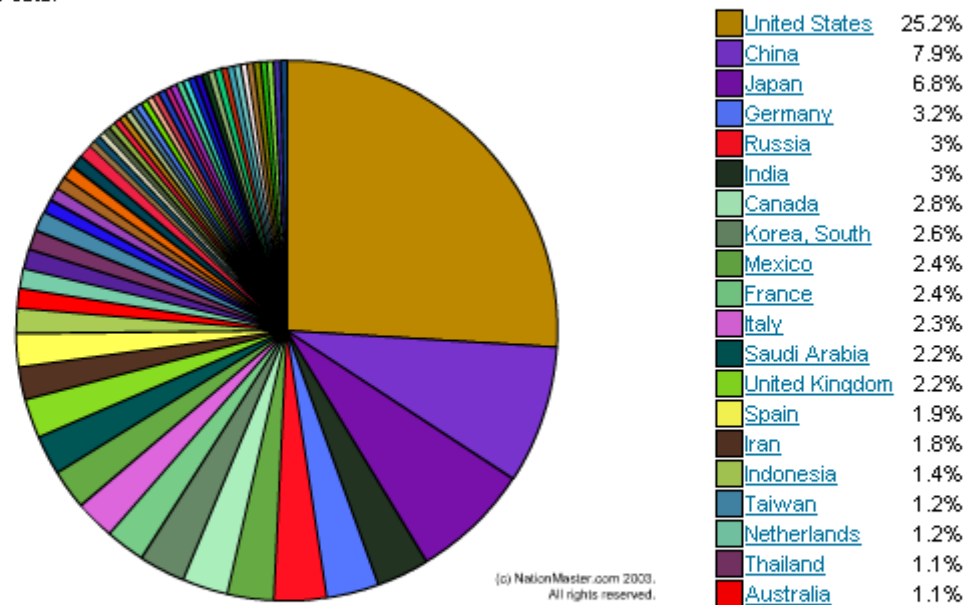
Energy Consumption: 1980 through 2007



US Gasoline consumption:
higher than rest of world combined, 2003

Energy Statistics > Oil > Consumption (most recent) by countryVIEW DATA: **Totals**[Definition](#) [Source](#) [Printable version](#)[Bar Graph](#)[Pie Chart](#)[Map](#)

Showing latest available data.

Rank [Countries](#) [Amount](#) (top to bottom)

Rank	Countries	Amount
#1	United States:	20,730,000 bbl/day
#2	China:	6,534,000 bbl/day
#3	Japan:	5,578,000 bbl/day
#4	Germany:	2,650,000 bbl/day



Energy Price Outlook Topics

1. Nature of the Markets
2. Oil Speculators
3. Oil Subsidies
4. Long Term Fundamentals

Global Supply versus Demand million barrels per day

No surplus capacity

Year	SUPPLY	DEMAND
Q1 2008	87.3	87.3
2007	85.6	86.0
2006	85.4	84.9
2005	84.6	83.9
2004	83.4	82.5

source: IEA

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Walter J. Zimmermann Jr. e-mail: walterz@united-icap.com**Outlook for
Energy Prices****Producing Regions:
by Peak Production Date**

1955 - Austria	1998 - Argentina
1967 - Germany	1998 - Venezuela
1971 - Texas	1999 - Columbia
1971 - Lower 48 USA	1999 - Ecuador
1973 - Iran	1999 - UK
1973 - Qatar	1999 - Algeria
1974 - Canada (conv)	2000 - Australia
1976 - Romania	2001 - Oman
1977 - Indonesia	2001 - Norway
1977 - Trinidad	2001 - Yemen
1979 - Brunei	2002 - USA (NGL)
1981 - Peru	2002 - Angola
1989 - Alaska	2003 - China
1993 - Egypt	2004 - Denmark
1995 - India	2004 - Mexico
1995 - Syria	2004 - Vietnam
1997 - Gabon	2004 - Congo
1997 - Malaysia	

Of the 65 largest oil producing countries
54 have passed their peak of production

**Growing World Energy Demand
million barrels per day equivalent**

Continent	2004	2030	% Chg
China	26	52	+100%
India	11	29	+164%
Latin America	13	24	+85%
Asia Pacific	22	38	+73%
Middle East	11	18	+64%
Africa	12	19	+58%
Russia	20	28	+40%
North America	55	69	+25%
Europe	39	46	+18%
Japan	<u>11</u>	<u>12</u>	+9%
	220	335	+ 52%

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Energy Prices****Producing Regions:
by estimated Peak Production Date**

2010 - est. Russia
 2010 - est. Iraq
 2011 - est. Saudi Arabia
 2011 - est. Brazil
 2012 - est. Columbia
 2017 - est. UAE
 2018 - est. Kuwait

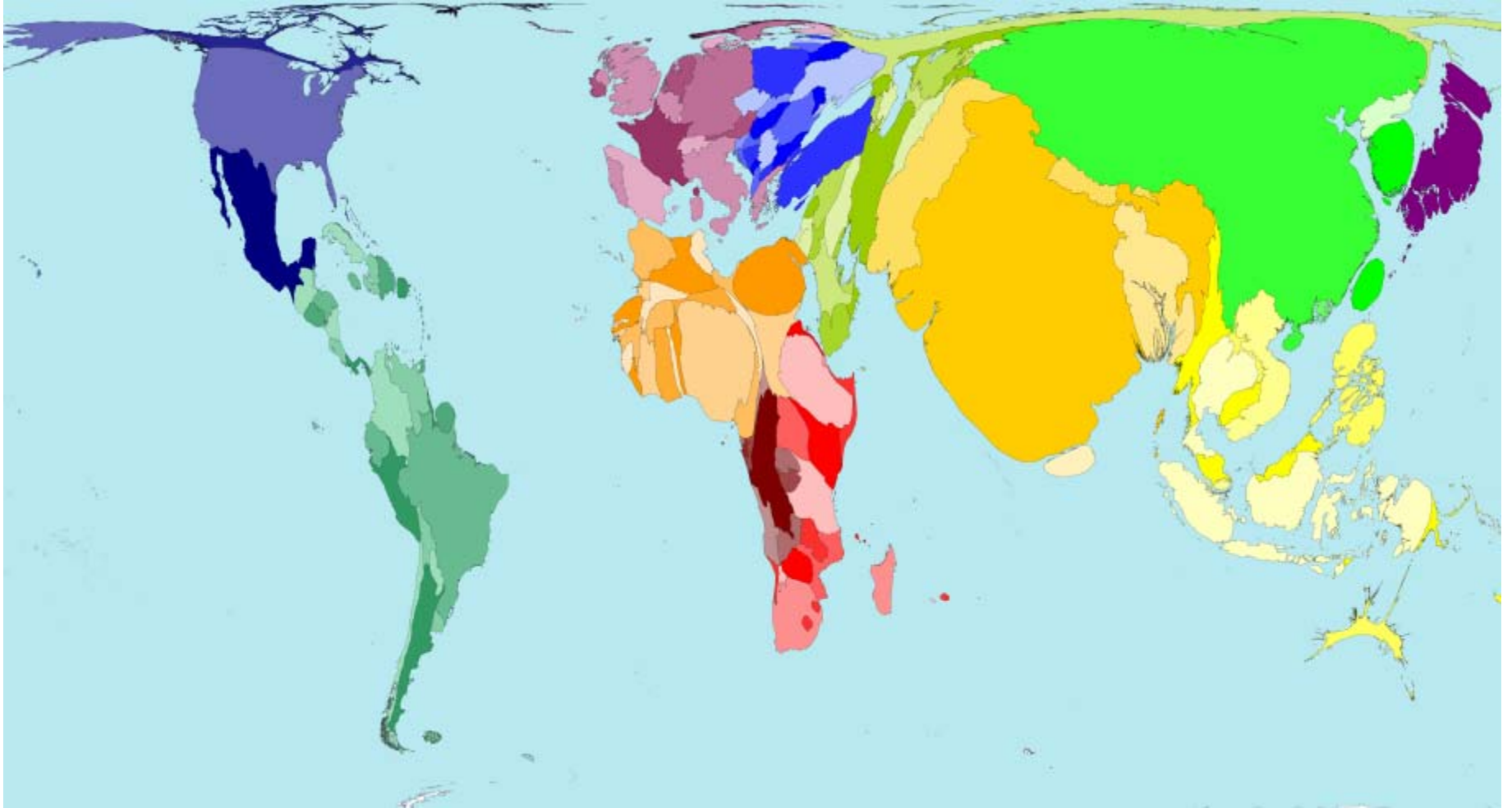
**Growing World Energy Demand
million barrels per day equivalent**

Continent	2004	2030	% Chg
China	26	52	+100%
India	11	29	+164%
Latin America	13	24	+85%
Asia Pacific	22	38	+73%
Middle East	11	18	+64%
Africa	12	19	+58%
Russia	20	28	+40%
North America	55	69	+25%
Europe	39	46	+18%
Japan	<u>11</u>	<u>12</u>	+9%
	220	335	+ 52%

By 2018 oil production in every
single country will have peaked

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Energy Prices****World Population**

the size of each territory shows the relative proportion of the world's population living there

www.worldmapper.org

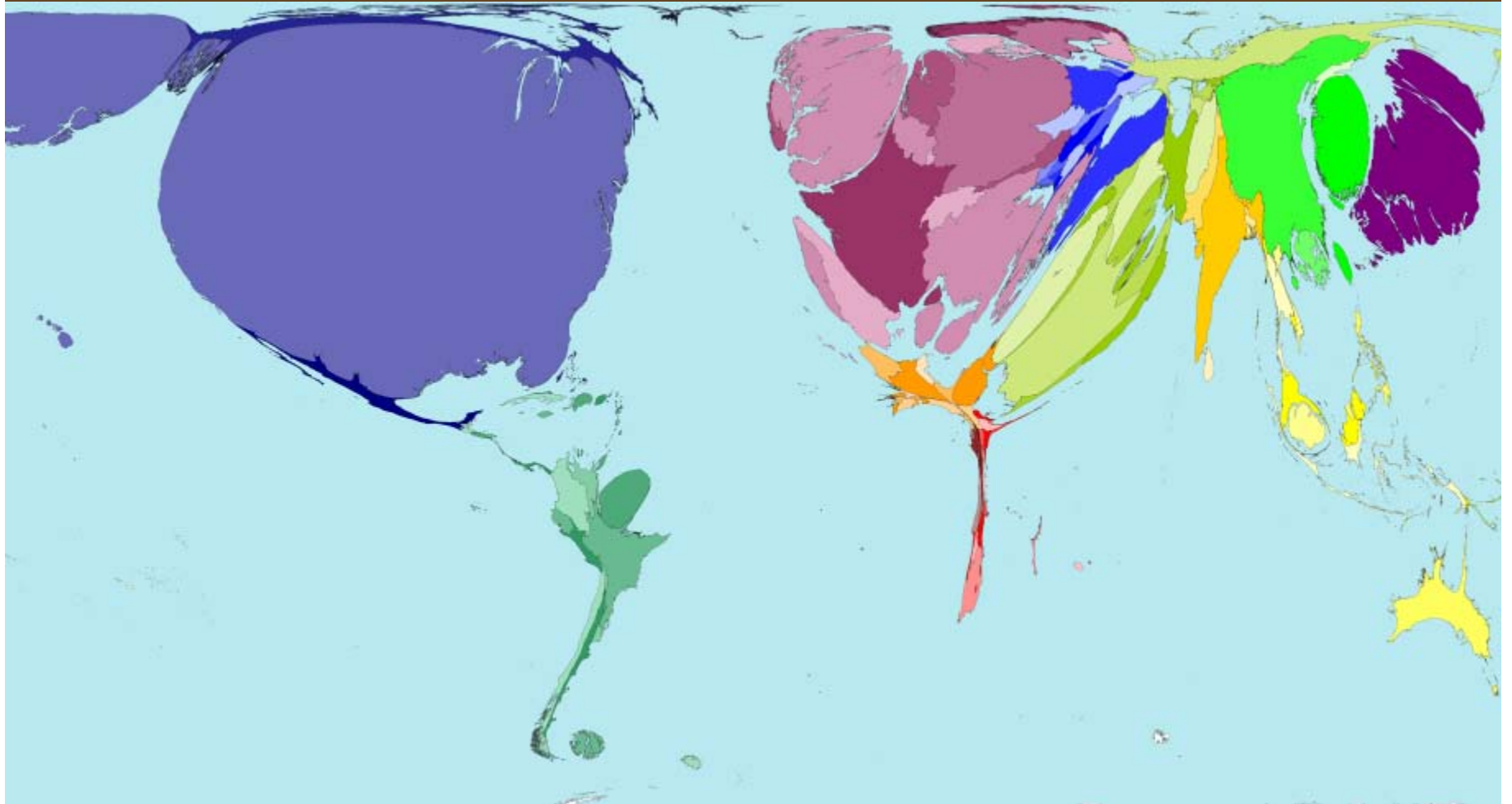
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**Outlook for
Energy Prices**

State Military Spending

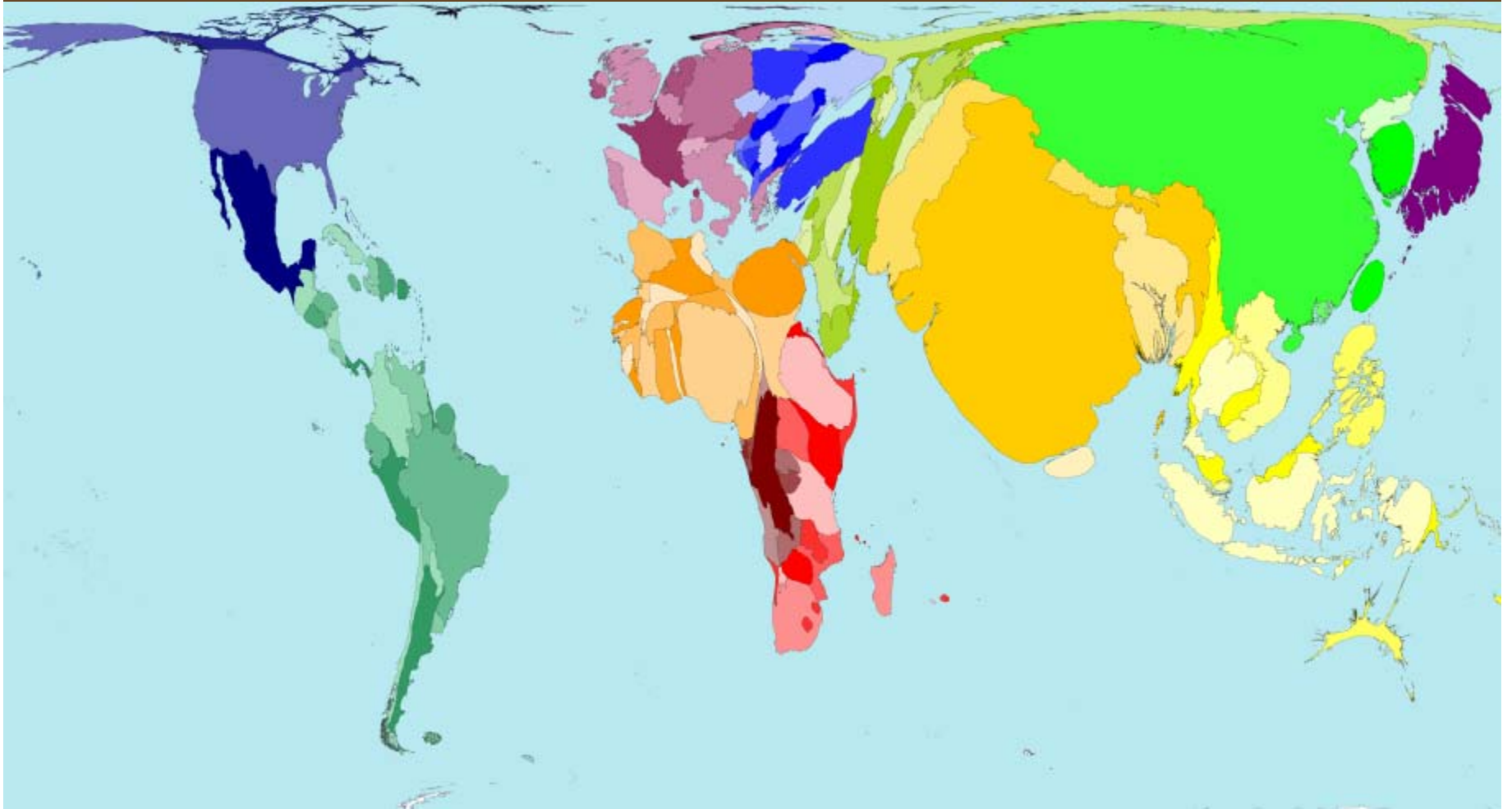


territory size shows the proportion of state military spending world-wide that was spent there in 2002

www.worldmapper.org

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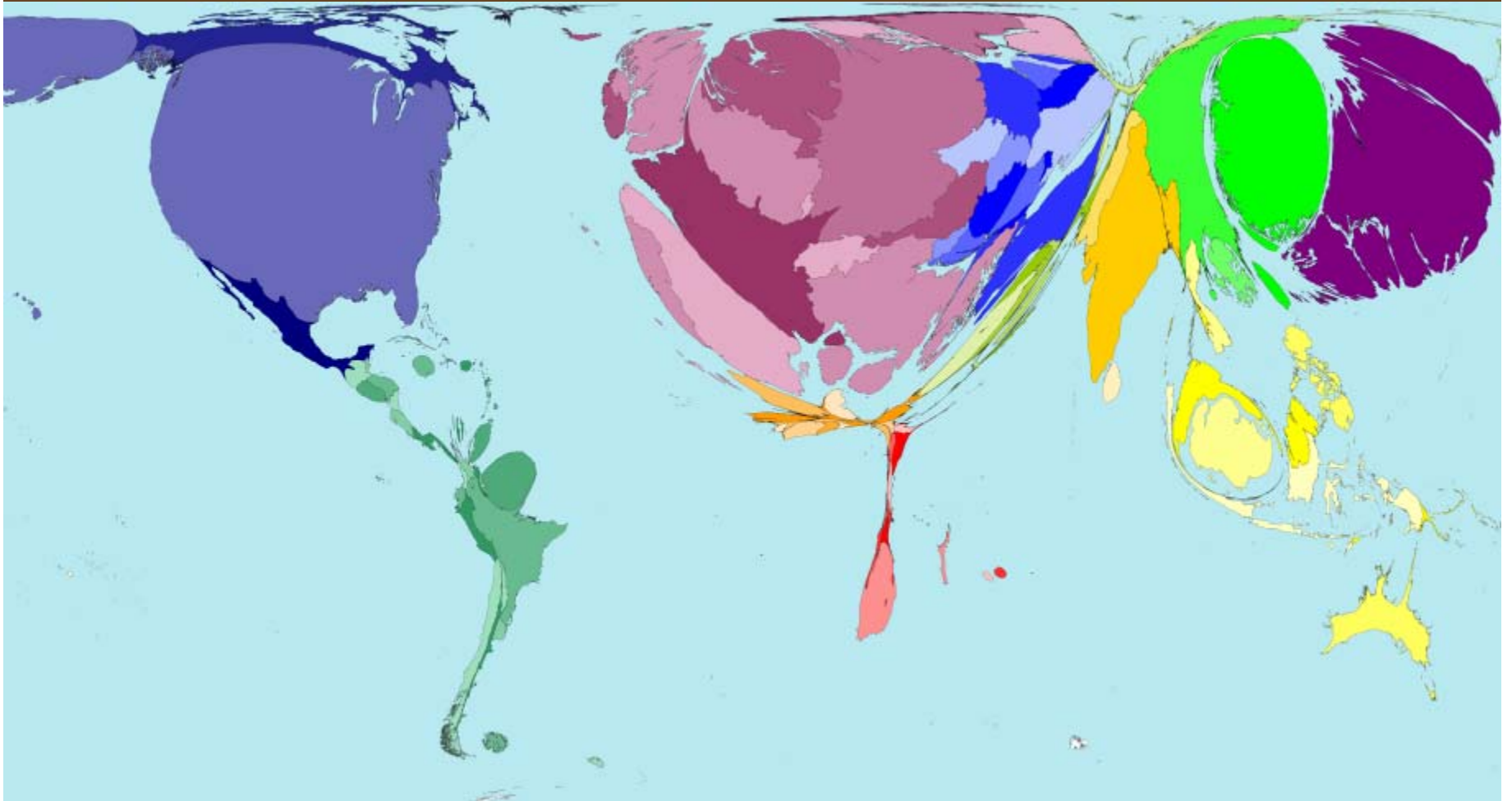
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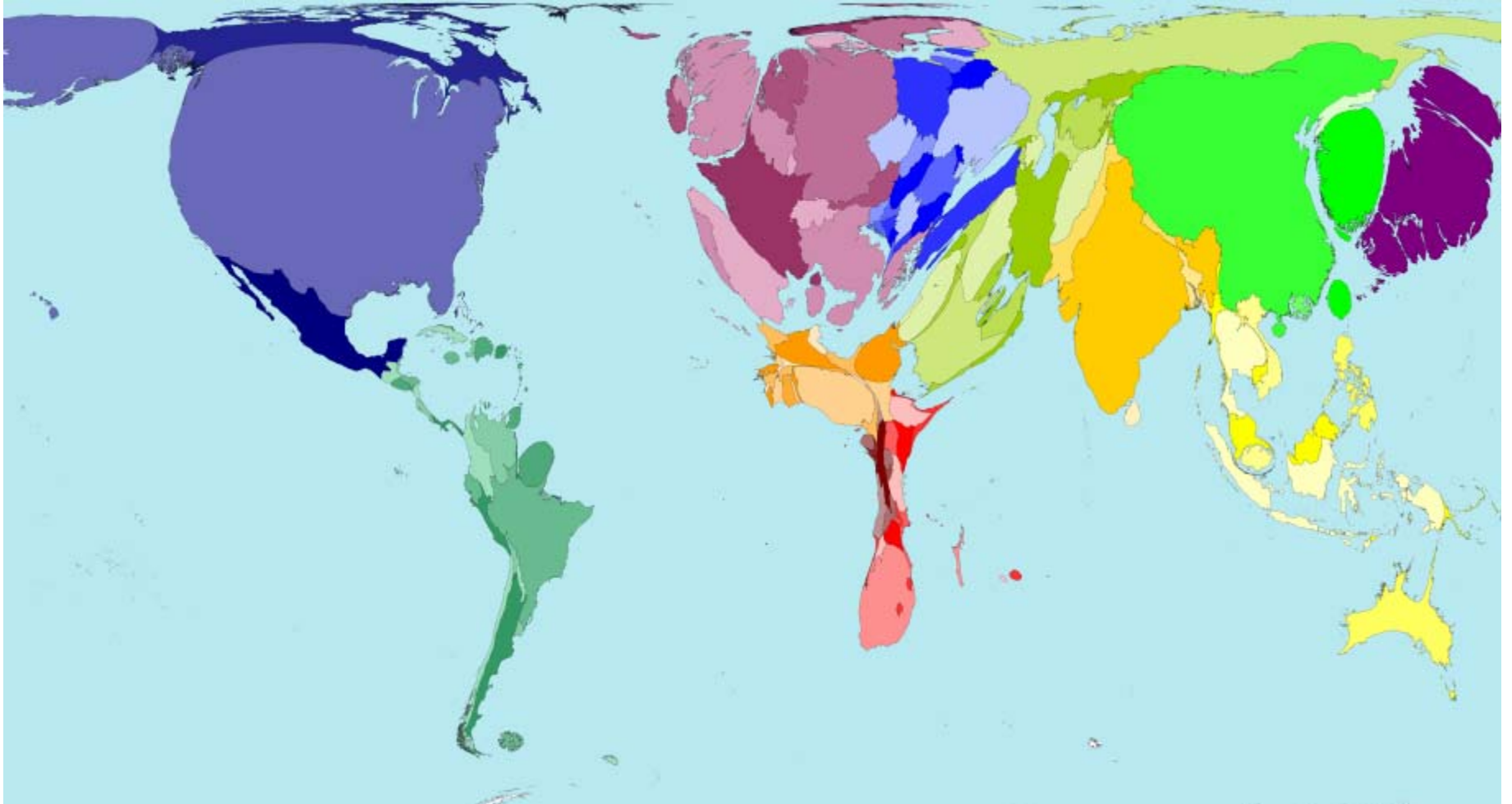
Fuel Imports



territory size shows the proportion of worldwide fuel imports arriving there

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Energy Prices****Fuel Usage**

territory size is proportional to the percentage of world fuel usage that occurs there

www.worldmapper.org

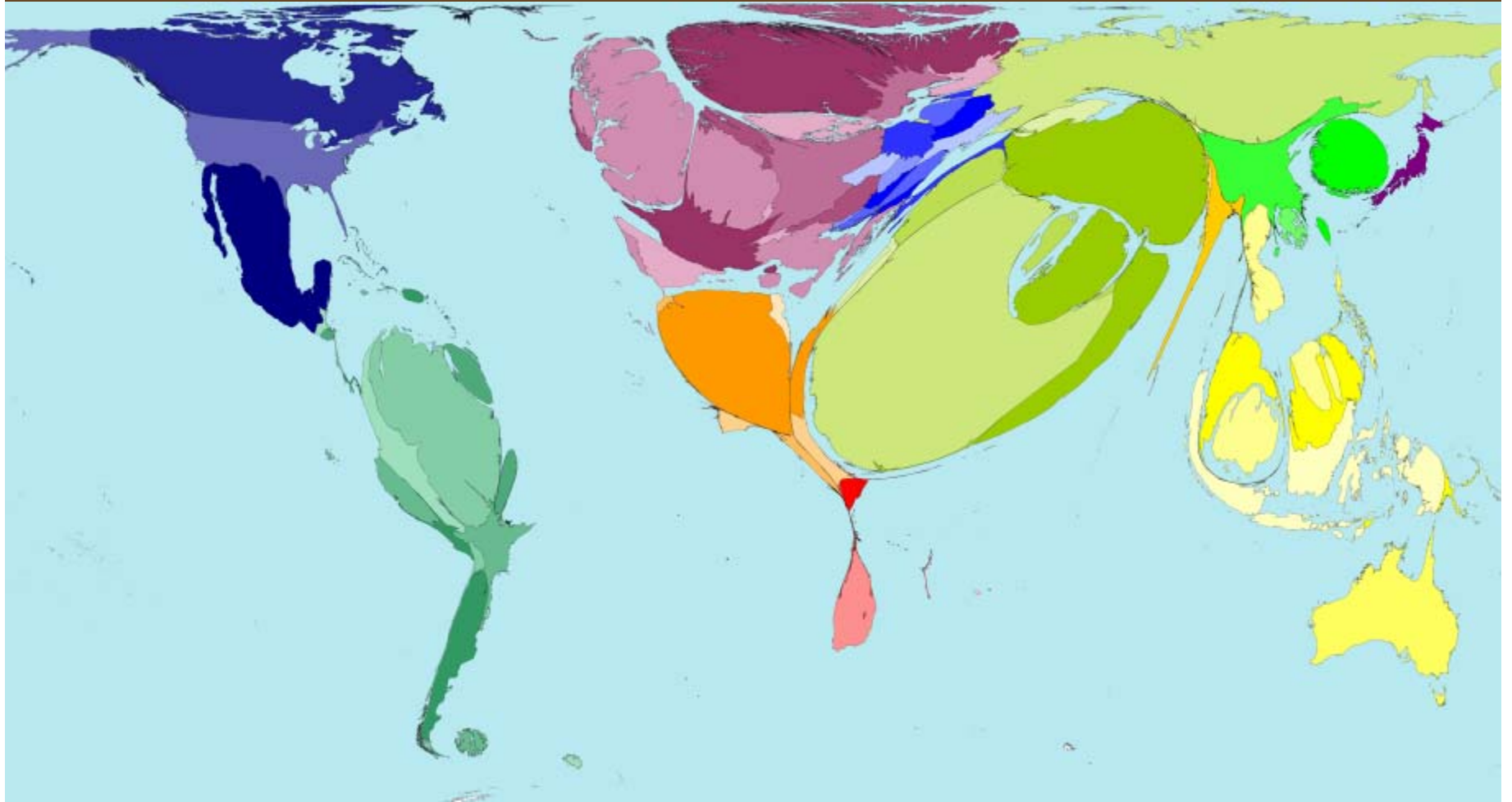
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**Outlook for
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Fuel Exports

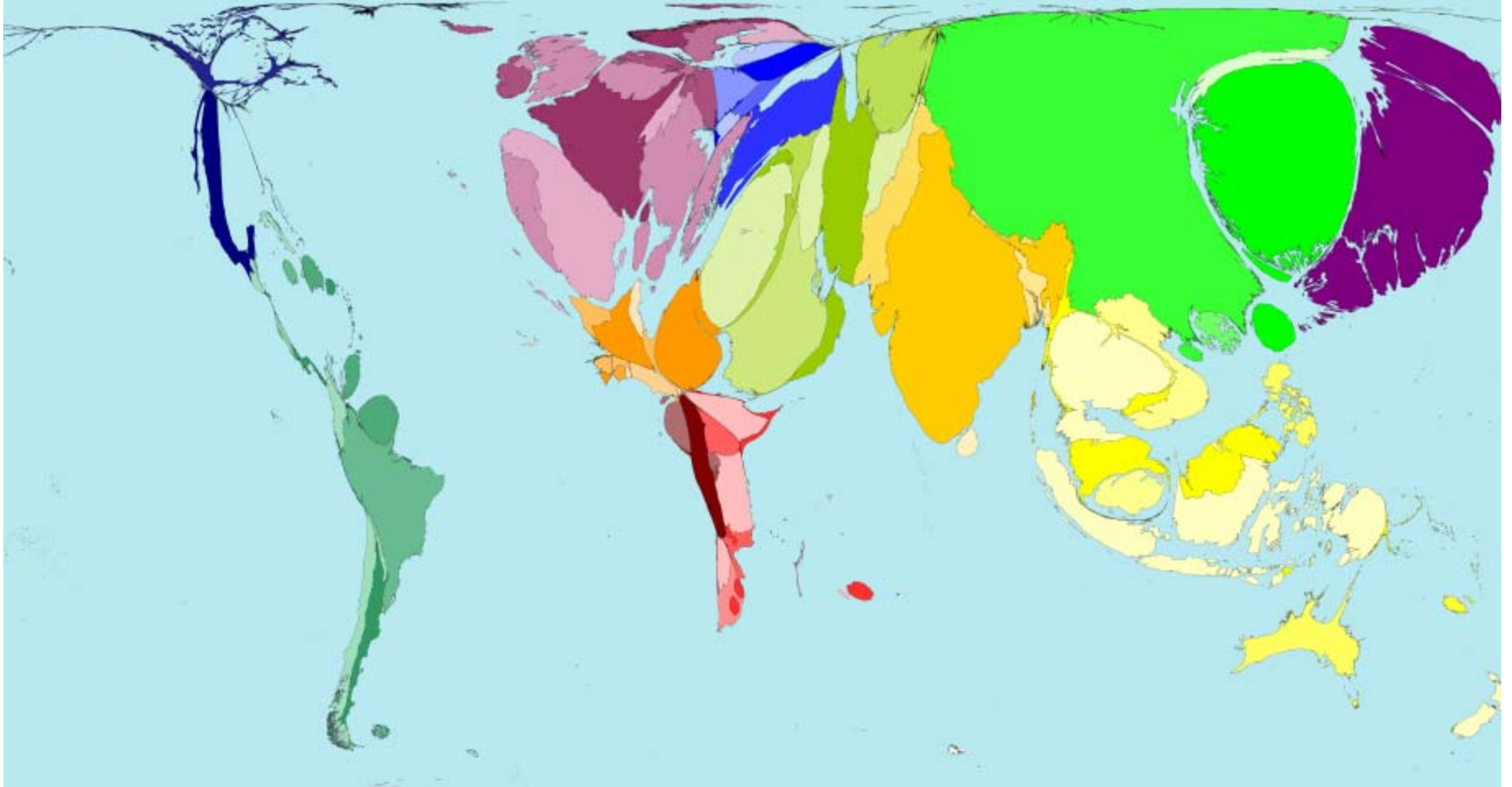


territory size shows the proportion of worldwide gross fuel exports from there

www.worldmapper.org

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Energy Prices****Worldwide Increase in Fuel Use 1980 to 2001**

territory size shows the proportion of worldwide increase in fuel use that occurred there from 1980 to 2001

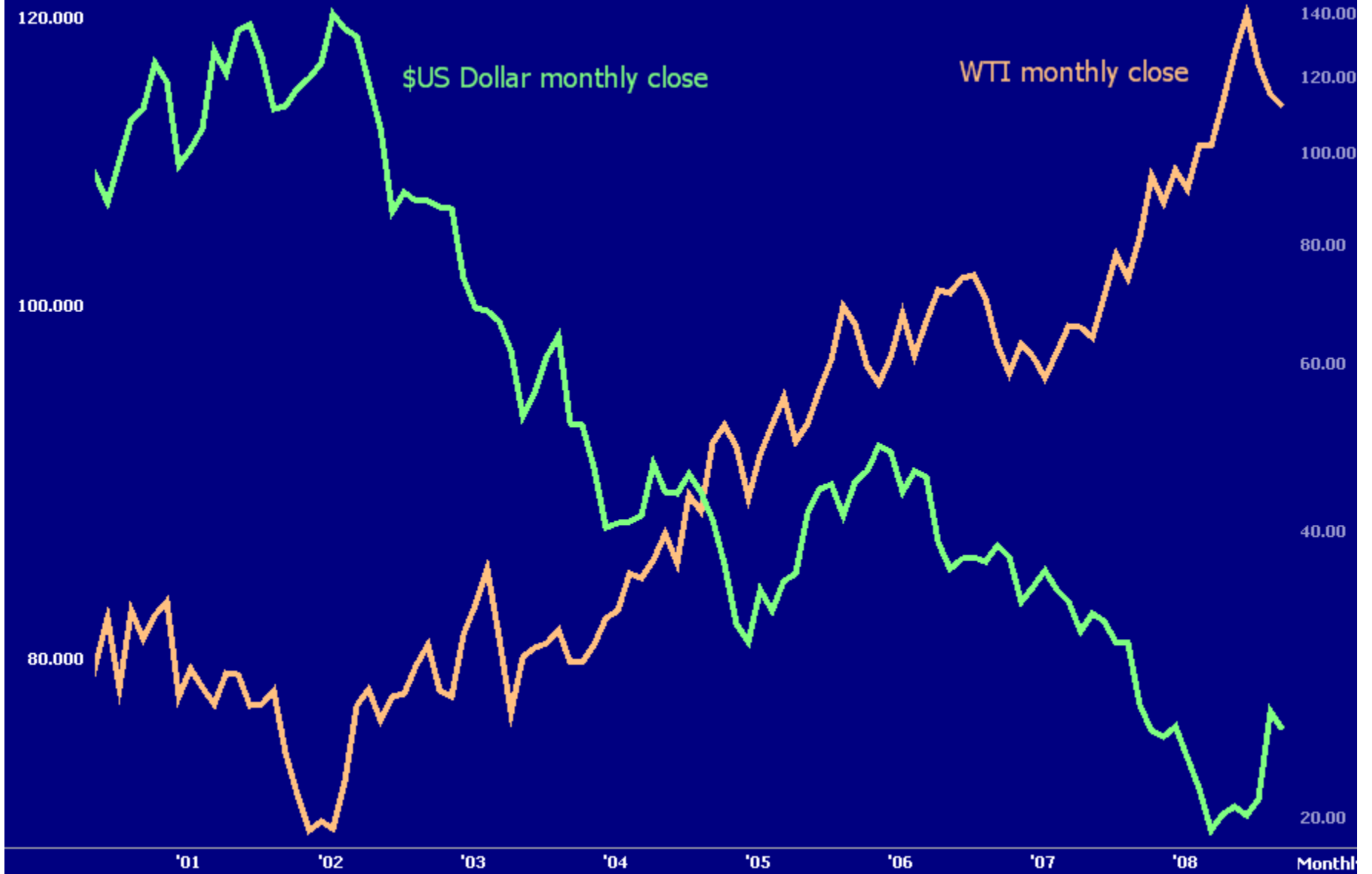
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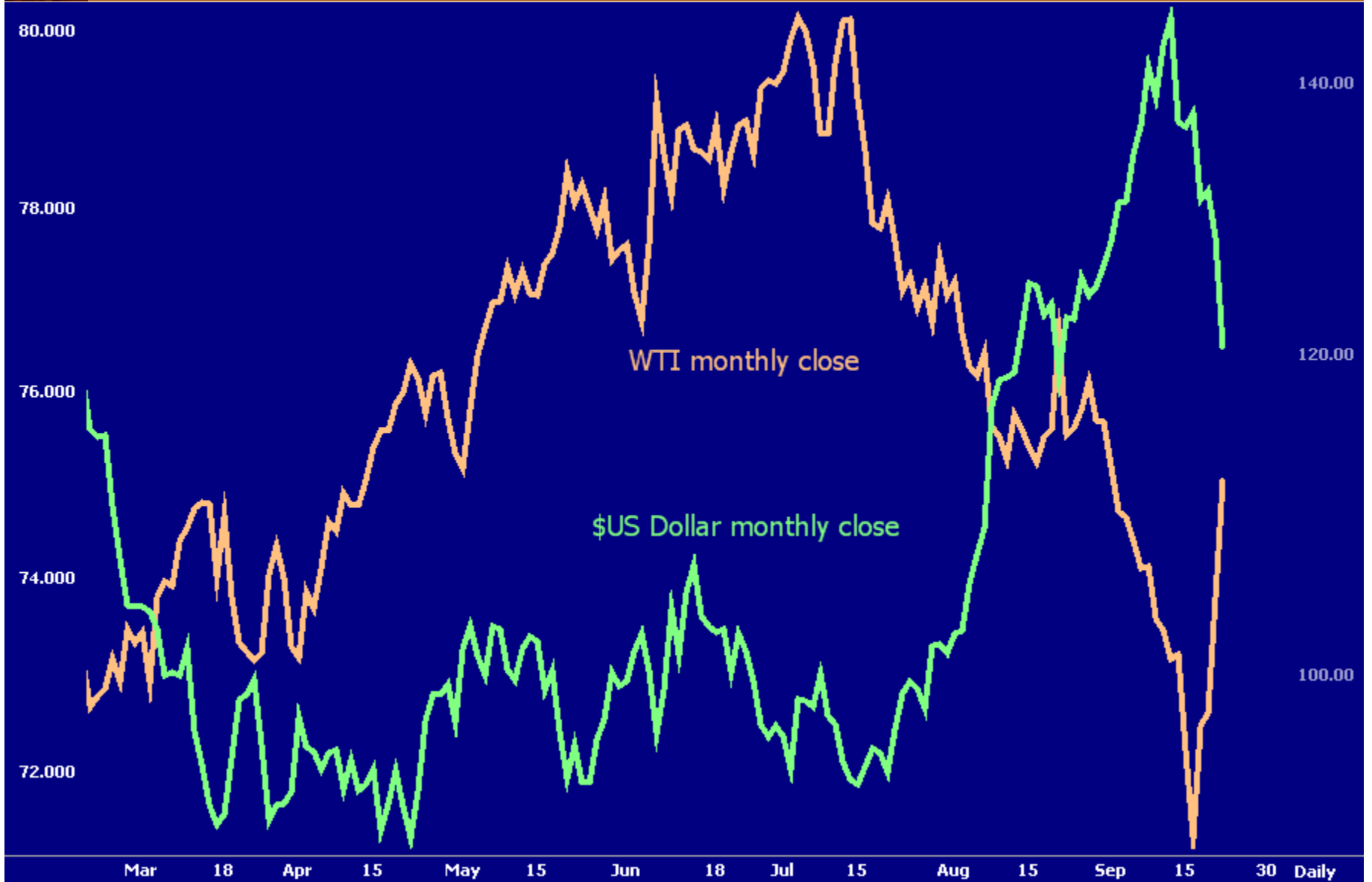


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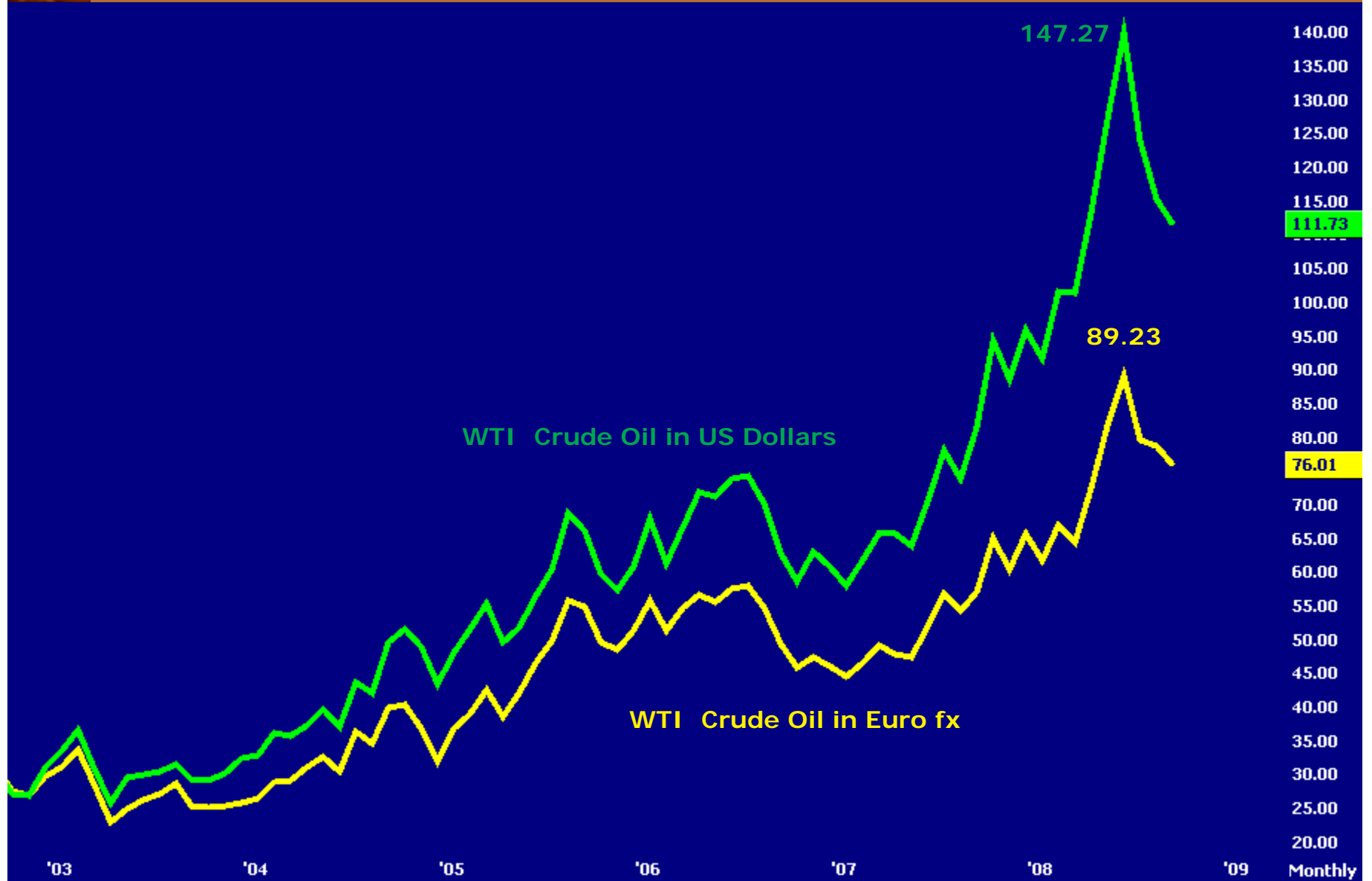


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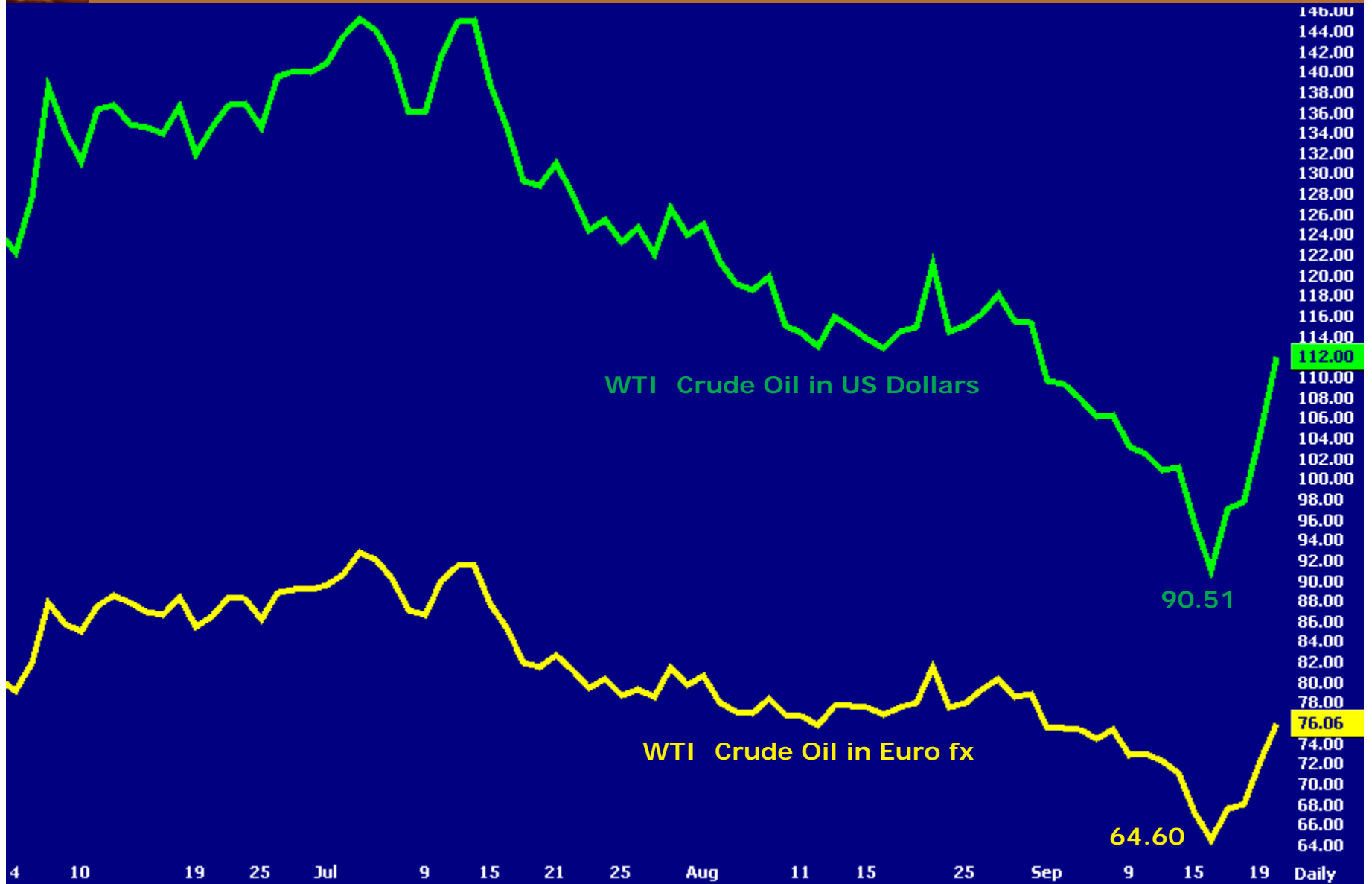


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**Outlook for
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Energy Price Outlook Topics

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Outlook for
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Why is it so difficult to predict the future?

*You cannot predict
what you do not want to happen.*



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Outlook for Energy Prices

WTI - monthly chart - log scale

Recession Model - Extent and Duration

- Our support for the recession model is **82.00**
- The wave IV correction will have lasted as long as the wave II correction by **September 2009**





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Outlook for Energy Prices



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Outlook for WTI

the I = V in percent gain if 81.00 = IV

WTI - monthly chart - log scale

Post Recession Recovery - Extent and Duration

- From an **82.00** low the final wave V up will equal the initial wave I up in percent gain at **299.00**
- From a Sep 2009 wave IV low the wave V up will have lasted as long as the wave V by **July 2011**



A Recession is Not an Energy Policy

- The last recession from March 2000 drove Crude Oil from **38.00** to **17.00** and Natgas from **10.000** to **2.000**
- That decline convinced many that there was no longer any need to hedge against higher energy prices
- One lesson from that decline is that a recession is not a solution to the world's energy problems

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Outlook for WTI

WTI - monthly chart - log scale

the 4.236 x "A" = "C"

Depression Model - Extent and Duration

- Our support zone for the depression model is, minimum to maximum, **62.25 - 39.15**
- This model forecasts a several year long economic contraction
- Compared to a recession, a depression would only be a longer term period of temporary relief from higher energy prices



Recession Model

- Our model for a 2 to 3 year recession pegs long term support for Crude Oil into **\$80.00** and a post recession target to **\$300.00**

Deflation - Depression Model

- Our model for an extended economic contraction pegs long term support for Crude Oil to **\$50.00**
- **A depression would merely give a longer period of temporary relief from higher energy prices.**



the 2.618 x -A- = -C-

US Dollar (DX Index) - daily chart - log scale

US Dollar (DX Index) - Key Support

- How low can the US Dollar fall and still fit the model for a bull market correction of the March to September rally?
- We peg that key support to the zone **74.395 - 72.765**





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Outlook for Energy Prices



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Outlook for S&P 500



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Outlook for S&P 500

S&P 500 - monthly chart
- log scale -



Bearish Case - Depression Model

- In our depression model the S&P 500 is in for a much greater decline in both duration and extent
- The implied target in this model would be the vicinity of **307.00**

as 1.618 x A = C

307.19

307.19
C of "B"

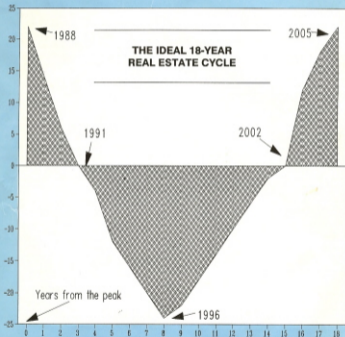
'91 '93 '95 '97 '99 '01 '03 '05 '07 '09 11/1/2011 3 Monthly

- **Sub-Prime Mortgage Implosion**
- **Credit Contraction**
- **Investment Banks failing**
- **Banks Calling in Loans to Hedge Funds**
- **Hedge Funds closing**
- **“De-leveraging” running rampant**
- **Credit Default Swaps at Risk of Default**

**Every process cited here is deflationary.
If the Fed fails to reflate and deflation
takes hold the Dollar will be the only
asset that holds its value.**

CYCLES

The Membership Magazine of the Foundation for the Study of Cycles, Inc.



Volume 42, Number 3

May/June 1991

Cycles in Real Estate
Solar-Terrestrial Linkage in Climate and War
World Capital Markets



Energy Price Outlook Topics

1. Nature of the Markets
2. Oil Speculators
3. Oil Subsidies
4. Long Term Fundamentals
5. Long Term Technicals