

## OPIS'18<sup>TH</sup> ANNUAL SUPPLY AND TRANSPORTATION SUMMIT

October 10-11, 2016 Fairmont Scottsdale Princess Scottsdale, Arizona



## Learn more at www.opisnet.com/events/supplysummit APMA Conference attendees save \$300! Discount code: APMA

#### www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878

## **Key Agenda Topics**

- Higher octane fuel blends
- What's next for rail transport
- Mexican downstream markets
- West Coast refining landscape

- Role of the investment bank
- Future of rail transport
- Impact of the Panama Canal expansion
- And Much More!



301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878

# OPS OIL PRICE INFORMATION SERVICE

www.opisnet.com • tkloza@opisnet.com



2016 Annual Conference



# Myth, Legend & Reality in the Modern Fuel Business

www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

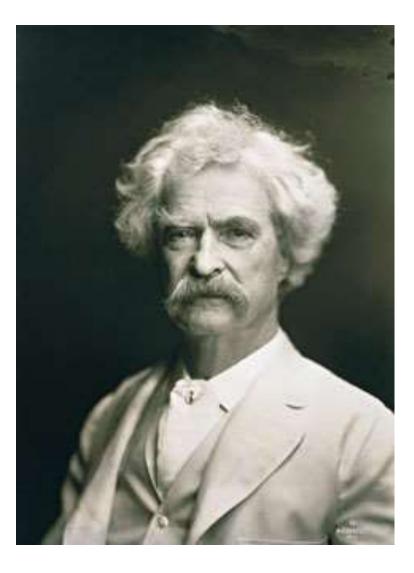
9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878



2016 Annual Conference



## **Initial Disclaimer**



www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878



2016 Annual Conference



## **Gasoline Schadenfreude**



www.opisnet.com

301-287-2645 888-301-2645 (toll-free)



# 2004: Reference Point Drastic change . . .

www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878



2016 Annual Conference











# Speaking of politicians...

#### www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878



2016 Annual Conference



# What if Politicians followed the NASCAR Lead?



## www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878



2016 Annual Conference





301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878



**2016 Annual Conference** 





301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878



2016 Annual Conference



## Some more credentials . . .

www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878



**2016 Annual Conference** 



# Man who nailed 2015 oil plunge is predicting a dismal 2016



Kloza sees U.S. oil benchmark hitting \$32 a barrel

"I would think that we are going to retest the lows...the market will be most severely tested in February, March and April when we get Iranian crude and we have refinery maintenance. I still think we hold at \$32 [a barrel] or higher and before the end of the year is over maybe \$55 [ a barrel]," Kloza said.



## 2016 Annual Conference

September 11-12, 2016 Hilton Sedona at Bell Rock

#### www.opisnet.com

301-287-2645 888-301-2645 (toll-free)



# Responses from my Esteemed Friends & Colleagues

From: Fred Rozell [mailto:frozell@opisnet.com] Sent: Thursday, December 31, 2015 6:10 PM To: Tom Kloza Subject: Marketwatch Story

Tom,

I just saw the New Year's Eve story on Marketwatch where you are described as "Man who Nailed the oil market in 2015."

www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878 The only thing you ever nailed was the attached sign for your own special parking spot.



2016 Annual Conference



301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878





2016 Annual Conference



# Are there really global energy price experts?

**SEPTEMBER 22, 2014 (Jim Volker, CEO of Whiting Petroleum)** *"Let's not panic over the first little decline in oil prices."* 

**NOVEMBER 5, 2014 (T. Boone Pickens, Chairman & CEO of BP Capital)** "This has only been going on for 30 days. The world hasn't changed. OPEC has got to have a better price for oil than \$80 a barrel."

**NOVEMBER 10, 2014 (John Hess, CEO of Hess Corp.)** *"We have an \$80 Brent case; that is what we call our stress test. We don't think \$80 Brent is likely."* 

**NOVEMBER 26, 2014 (Tom Kloza, Global Head of Energy Analysis at OPIS, via CNBC)** *"Oil could plummet to \$35 a barrel in 2015 if OPEC doesn't reach an agreement by the spring."* 

JANUARY 1, 2015 (Andy Hall, Crude Trader and Commodities Hedge Fund Manager) Proclaimed that \$40 a barrel represented an "absolute price floor," saying that crude couldn't sell for long below the marginal cost of supply.

APRIL 7, 2015 (Tom Kloza, Global Head of Energy Analysis at OPIS, via CNBC) "Don't trust this oil bounce."



2016 Annual Conference

September 11-12, 2016 Hilton Sedona at Bell Rock

www.opisnet.com

301-287-2645 888-301-2645 (toll-free)



301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878

# Spring WTI Crude Oil Price Estimates, A Year Ago

Bank/Entity	2H 2015 Outlook	2016 Projection	
WTI Curve	\$60.25 bbl	\$63.10 bbl	
Bank of America ML	\$54.00 bbl	\$57.00 bbl	
Barclays	\$49.50 bbl	\$57.00 bbl	
CIBC	\$66.00 bbl	\$70.50 bbl	
Citi	\$51.00 bbl	\$61.00 bbl	
EIA	\$56.85 bbl	\$70.00 bbl	
Goldman Sachs	\$40-\$65 bbl	\$65.00 bbl	
Raymond James	\$60.25 bbl	\$65.00 bbl	
TD	\$52.50 bbl	\$65.00 bbl	
Average	\$55.87 bbl	\$63.73 bbl	



2016 Annual Conference



## **Current Crude Projections** (\$/bbl)

	Late 2016	<u>2017</u>
BAML CITI EIA Goldman Sachs ICE (Exchange) Morgan Stanley NYMEX ICE (Brent)	\$54/\$55 \$52 \$48 \$51 \$48.43 \$38.50/\$40 \$46.46 \$48.00	\$59/\$61 \$60 \$60/\$62 \$54.73 \$48/\$49.50 \$49.90 \$50.50

www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878





2016 Annual Conference



# A word about International Data Integrity . . .



#### www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878

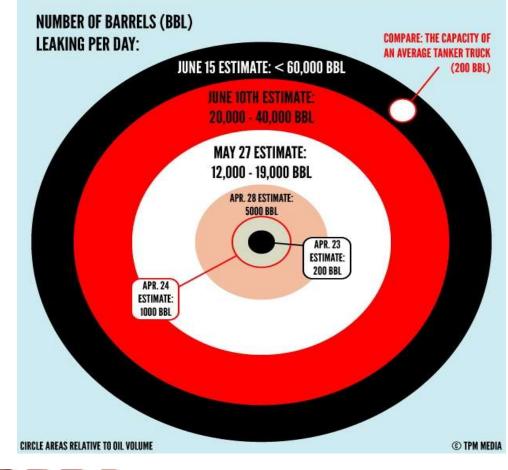


2016 Annual Conference



# Example of the Energy Data Schvitz

## **EVOLVING ESTIMATES OF GULF OIL LEAKAGE**



www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878

2016 Annual Conference

September 11-12, 2016 Hilton Sedona at Bell Rock

ARIZONA PETROLEUM MARKETERS ASSOCIATION





301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878



2016 Annual Conference



# ONE SACRED TRUTH: SIZE DOES MATTER

- As recently as 1995, the total open interest across NYMEX (now CME) and InterContinental Exchange was less than 1-million contracts or about 1-billion barrels.
- More recently, we have often traded more than 6million contracts or 6-billion barrels of oil (last Thursday e.g.) representing trillions of dollars at risk.
- By some estimates, something close to 94% of the daily volume is done between "machine & machine."



2016 Annual Conference

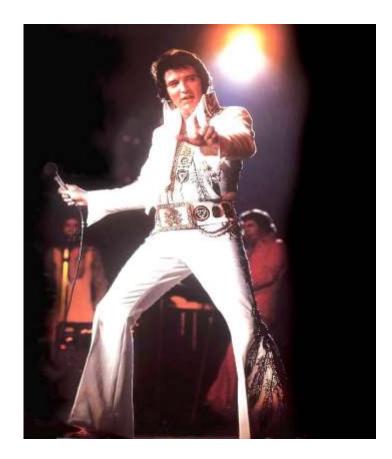
September 11-12, 2016 Hilton Sedona at Bell Rock

www.opisnet.com

301-287-2645 888-301-2645 (toll-free)



# Volatility is the Oil Trader's Elvis



## www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878



2016 Annual Conference



# Beware of Ridiculous Correlations!

www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

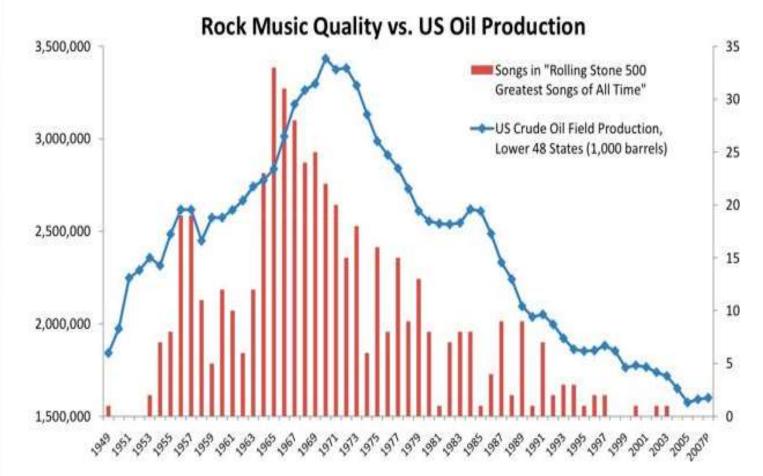
9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878



2016 Annual Conference



# One Example of a Bad Correlation...



### www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878

## 2016 Annual Conference

September 11-12, 2016 Hilton Sedona at Bell Rock

ARIZONA PETROLEUM MARKETERS ASSOCIATION



888-301-2645 (toll-free)

9737 Washingtonian Blvd.

Gaithersburg, MD 20878

301-287-2645

Suite 200

# Observations on U.S. Refining Trends

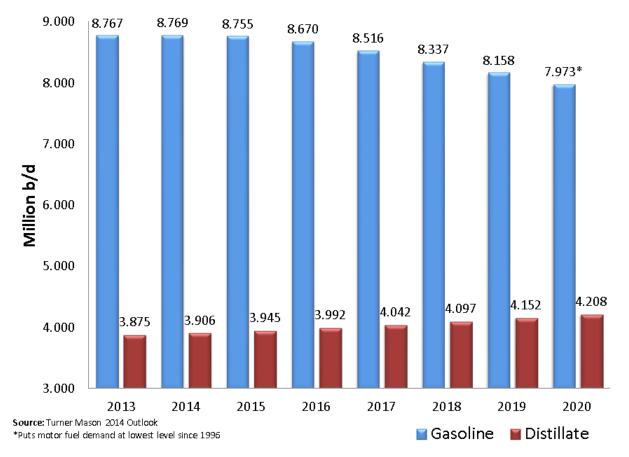
- Refineries are much more valuable assets these days, and are sophisticated. That means the maintenance cycles are longer, and breakdowns during periods of high runs are more plentiful.
- Another 200,000 b/d of U.S. refining capacity comes online in 2016, so by year's end we'll have added 2-million b/d of capacity in the 21<sup>st</sup> century. Most of the additions are tilted toward diesel. (Montana, ND. e.g.).
- Worldwide additions to diesel and jet fuel production have been too ambitious, particularly given slowdowns in EM countries.
- Gasoline is now the marquee product, or the make-or-break product. Diesel had that stature from 2007-2015.
- We won't need to host telethons or ice bucket challenges for refiners.



2016 Annual Conference



## What We Thought . . . Three Years Ago Demand Trends – 2013-2020



#### www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878



2016 Annual Conference



# Key Drivers of Oil Price Volatility in the Next 20 Months

- Outright crude oil prices
- Variable gasoline recipes
- Export & Import Dynamics
- Financial Fund Flows ETF's
- The Madness of Crowds Daily trading of annual volume.

#### www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878

## And one key driver that deserves its own slide...



2016 Annual Conference



## Just-in-Time: Key North American Metric



- Shallow product inventories are quick-to-fill, but also quick-to-empty
- Storage per capita is a mere fraction of what it was in 1975-1985
- Just-in-time reigns supreme for gasoline seasonal, but diesel seasonal is very much weather-dependent.



2016 Annual Conference

September 11-12, 2016 Hilton Sedona at Bell Rock

## www.opisnet.com

301-287-2645 888-301-2645 (toll-free)



# Gallons Per Guys & Gals

## Gasoline Storage Per Person

	1980	Summer 2017?
PADD 5	38.5gal	18.5gal
PADD4	43.0gal	21.4gal
PADD 3	110.0gal	70.2gal
PADD 2	48.6gal	23.8gal
PADD 1	36.0gal	20.7gal
Total	49.8gal	28.0gal

## Diesel Storage Per Person

	1980	Summer 2017?
PADD 5	16.5gal	9.5gal
PADD4	24.3gal	13.0gal
PADD 3	63.4gal	41.9gal
PADD 2	36.2gal	15.7gal
PADD 1	46.1gal	18.8gal
Total	49.8gal	19.2gal*

2016 Annual Conference

September 11-12, 2016 Hilton Sedona at Bell Rock

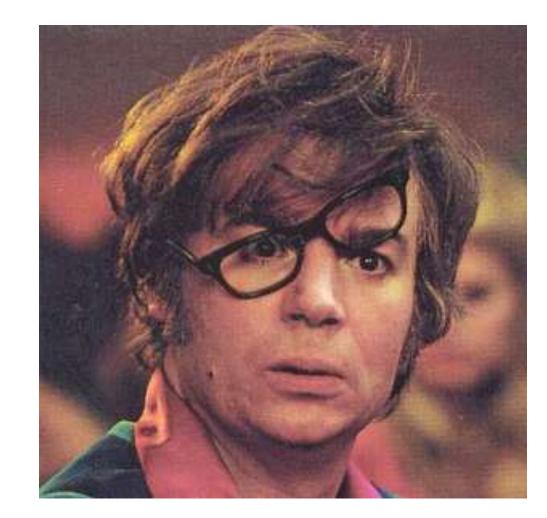
		Provide States	a second second second second	
	nn	ieno:	t.com	
~ ~ ~ ~ ~	.00	SILC		
1.	A			

301-287-2645 888-301-2645 (toll-free)





## Has Diesel Lost its Mojo?



#### www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878



2016 Annual Conference



# No Longer the Magic Molecule?

- Refiners have tilted construction and infrastructure toward making more diesel. There's no going back on that trend.
- Gasoline is the marquis product for refiners; diesel is a huge (but low volume) money-maker for marketers.
- This may be the start of a new normal. Worldwide gas demand on the rise; diesel demand gets crimped by still sluggish shale and weakness in commodity countries.
- New refining capacity still coming on internationally as well as the U.S. The yields are tilted toward diesel and jet fuel.
- Still, diesel inventories in all states is very much "just in time"; AG-related rallies are certain, as are Polar Vortex rallies.
  Panama Canal cuts some traffic.



2016 Annual Conference

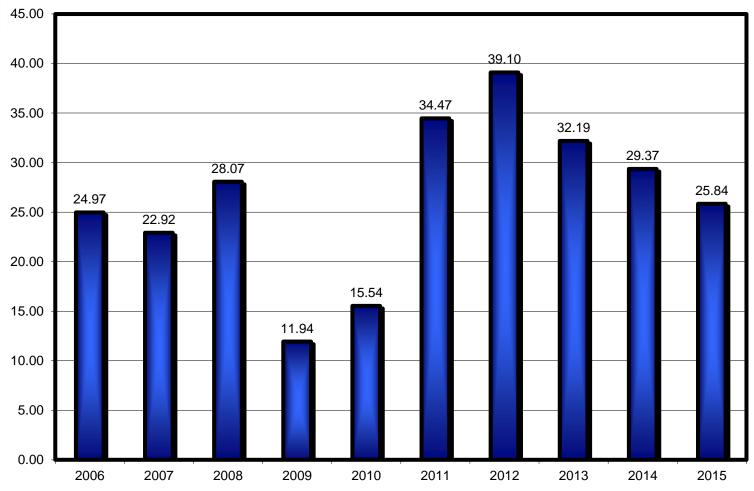
September 11-12, 2016 Hilton Sedona at Bell Rock

### www.opisnet.com

301-287-2645 888-301-2645 (toll-free)



# **The Magic Molecule?**



www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878



2016 Annual Conference



301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878

## Non-Random Thoughts on Ethanol & Fossil Fuels . . .

- The relationship between ethanol prices and RBOB prices will be more of a random walk through the rest of the decade. This century has seen months where ethanol has fetched a \$1.60 gal premium to RBOB, as well as a \$1 gal or so discount.
- Crude oil prices right now are too low to be sustainable. Global demand could outpace global supply gains by more than 1-million b/d in 2017, thinning the crude glut. Meanwhile, CAPEX for crude oil and gas projects is down some \$300-billion from the 2014 peak, and the rate of non-OPEC field decline is approaching 5 percent. We won't see \$100 bbl for a month, but we could see prices double from autumn 2016 lows.
- The planet will have many more cars in the next five years. Car penetration rates in developed countries run around 54 percent, versus about 14 percent in emerging countries. If China matched the developed rate, it would require the sale of another 580-million vehicles there.
- The 2020 decade will see an octane race and the battle lines are drawn. Refiners can meet higher octane needs, but only through expensive alkylation projects, etc. With 2016 a lousy year for refiners, they can't do it on a "Field of Dreams" basis.
- Gasoline differentiation could be tested in 2017 - Independents versus major refiners. The real test for E15 and higher blends begins in September.
  - Believe it or not, there is a group (that meets regularly) called the American Stripper Association.



2016 Annual Conference September 11-12, 2016

Hilton Sedona at Bell Rock



## **Predictions**

- Crude oil struggles in next 90 days but begins slow acting bull market between November 2016 and mid-2017, with a recession caveat. Shale resurrects, but can't make up for global declines later in decade.
- Return to \$70 bbl crude would bring 10-million b/d or more of U.S. crude oil output.
- The seasonality of gasoline gets even greater. When you think of gasoline, think of "Cake Boss & Sybil."
- Liquid fuels retain dominant share of the transportation kingdom through 2025 at least.



2016 Annual Conference September 11-12, 2016

Hilton Sedona at Bell Rock

www.opisnet.com

301-287-2645 888-301-2645 (toll-free)



888-301-2645 (toll-free)

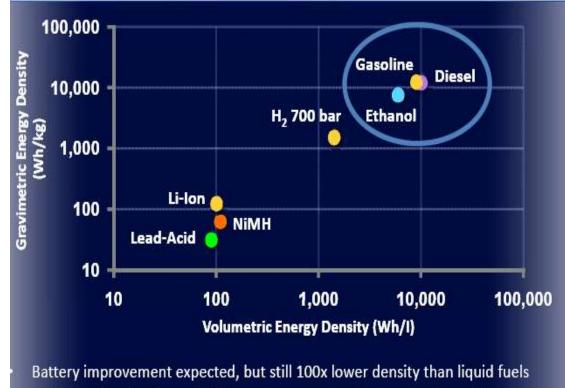
9737 Washingtonian Blvd.

Gaithersburg, MD 20878

301-287-2645

Suite 200

## Threats: Electricity & Hydrogen?



Hydrogen has significantly higher energy density than current batteries

Source: General Motors



### 2016 Annual Conference



## A more specific look at Arizona.

www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878



2016 Annual Conference

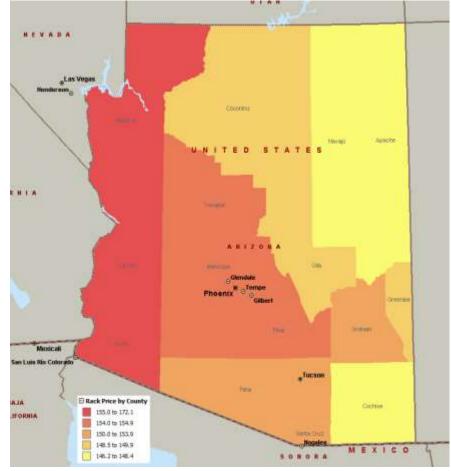




301-287-2645 888-301-2645 (toll-free)



## Arizona: YTD Rack Prices By County (Jan-Aug)





### 2016 Annual Conference

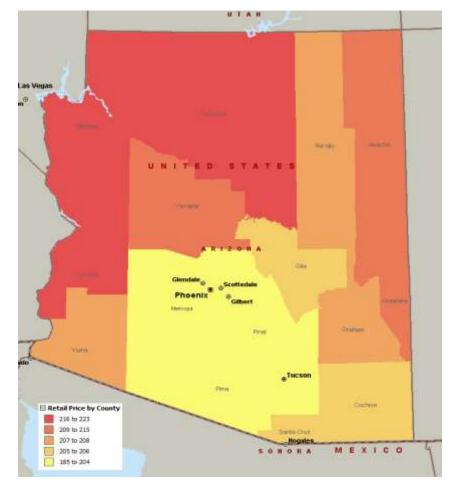
September 11-12, 2016 Hilton Sedona at Bell Rock

#### www.opisnet.com

301-287-2645 888-301-2645 (toll-free)



## Arizona: YTD Retail Prices By County (Jan-Aug)



### www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

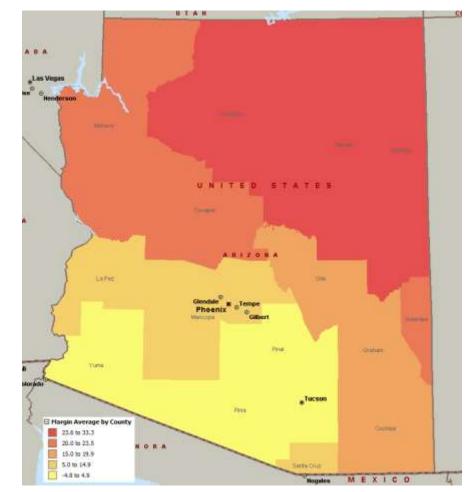
9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878



2016 Annual Conference



## Arizona: YTD Margins By County (Jan- Aug)





2016 Annual Conference

September 11-12, 2016 Hilton Sedona at Bell Rock

### www.opisnet.com

301-287-2645 888-301-2645 (toll-free)



# State Margins: 2015



### www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878



2016 Annual Conference



State Margins: Change YTD 2016 vs. Entire 2015



### www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878



2016 Annual Conference



State Margins: Change YTD 2016 vs. YTD 2015



### www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878



2016 Annual Conference



## **Appendix – Charts & Graphs**

www.opisnet.com

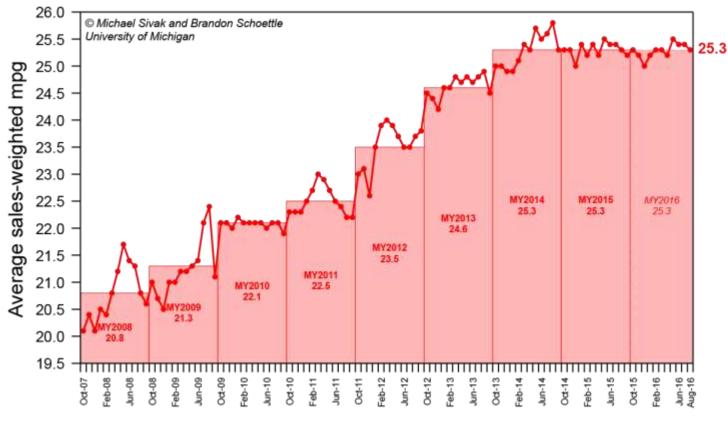
301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878



2016 Annual Conference





Month-Year



### 2016 Annual Conference

September 11-12, 2016 Hilton Sedona at Bell Rock

www.opisnet.com

301-287-2645 888-301-2645 (toll-free)



Year		Month														
	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec				
2007										20.1	20.4	20.1				
2008	<mark>20</mark> .5	20.4	<mark>20</mark> .8	21.2	21.7	21.4	21.3	20.8	20.6	21.0	20.7	20.5				
2009	21.0	21.0	21.2	21.2	21.3	21.4	22.1	22.4	21.1	22.1	22.1	22.0				
2010	22.2	22.1	22.1	22.1	22.1	22.0	22.1	22.1	21.9	22.3	22.3	22.3				
2011	22.5	22.7	23.0	22.9	22.7	22.5	22.4	22.2	22.2	<b>23.0</b>	23.1	22.6				
2012	23.5	23.9	24.0	23.9	23.7	23.5	23.5	23.7	23.8	24.5	24.4	24.2				
2013	24.6	24.6	24.8	24.7	24.8	24.7	24.8	24.9	24.5	25.0	25.0	24.9				
2014	24.9	25.1	25.4	25.3	25.7	25.5	25.6	25.8	25.3	25.3	25.3	25.0				
2015	25.4	25.2	25.4	25.2	25.5	25.4	25.4	25.3	25.2	25.3	25.2	25.0				
2016	25.2	25.3	25.3	25.2	25.5	25.4	25.4	25.3								

301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878



2016 Annual Conference



Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Year-to-Date Average (9/6)	1.486	1.515	1.316	1.564	1.808	2.154	2.687	2.726	3.557	2.235	2.753	3.561	3.625	3.568	3.520	2.504	2.084
Full Year Average	1.501	1.440	1.350	1.559	1.843	2.265	2.567	2.789	3.251	2.348	2.782	3.510	3.603	3.490	3.343	2.400	2.084
High	1.667	1.718	1.474	1.737	2.054	3.057	3.036	3.227	4.114	2.695	3.072	3.985	3.936	3.786	3.696	2.804	2.379
Low	1.287	1.077	1.107	1.455	1.484	1.766	2.196	2.143	1.616	1.618	2.608	3.072	3.219	3.179	2.257	1.998	1.697
High Low Difference	0.380	0.641	0.368	0.282	0.570	1.291	0.841	1.084	2.498	1.077	0.464	0.913	0.717	0.607	1.440	0.806	0.683
High Low Percent Change	29.5%	59.5%	33.2%	19.4%	38.4%	73.1%	38.3%	50.6%	154.6%	66.6%	17.8%	29.7%	22.3%	19.1%	63.8%	40.3%	40.2%
Summer Drive Average	1.565	1.510	1.398	1.544	1.924	2.321	2.920	2.947	3.943	2.586	2.728	3.659	3.557	3.585	3.573	2.697	2.237
First Quarter	1.398	1.461	1.167	1.589	1.647	1.920	2.337	2.342	3.107	1.887	2.716	3.268	3.582	3.552	3.384	2.258	1.860
Second Quarter	1.531	1.626	1.399	1.531	1.909	2.178	2.841	2.995	3.751	2.324	2.809	3.794	3.702	3.580	3.654	2.636	2.230
Third Quarter	1.550	1.460	1.403	1.597	1.879	2.546	2.828	2.855	3.849	2.568	2.721	3.621	3.644	3.555	3.483	2.566	2.183
Fourth Quarter	1.522	1.214	1.427	1.518	1.934	2.409	2.258	2.957	2.300	2.603	2.880	3.357	3.486	3.278	2.855	2.139	NA
First Half of Year	1.465	1.544	1.283	1.560	1.779	2.050	2.591	2.670	3.431	2.107	2.763	3.532	3.642	3.566	3.520	2.448	2.046
Second Half Year	1.536	1.337	1.415	1.557	1.907	2.477	2.543	2.906	3.075	2.586	2.801	3.489	3.565	3.416	3.169	2.352	2.183
Date of High	6/21	5/30	10/23	9/1	5/26	9/4	8/10	5/24	7/17	10/30	12/31	5/5	4/5	2/28	4/28	6/15	6/11
Date of Low	1/14	12/18	1/3	1/1	1/1	1/1	11/7	1/29	12/30	1/1	2/17	1/3	12/21	11/12	12/31	12/21	2/15

301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878



2016 Annual Conference



## **Questions & Answers**

www.opisnet.com

301-287-2645 888-301-2645 (toll-free)

9737 Washingtonian Blvd. Suite 200 Gaithersburg, MD 20878



**2016 Annual Conference** 



## OPIS 18<sup>TH</sup> ANNUAL SUPPLY AND TRANSPORTATION SUMMIT

October 10-11, 2016 Fairmont Scottsdale Princess Scottsdale, Arizona



### Learn more at www.opisnet.com/events/supplysummit APMA Conference attendees save \$300! Discount code: APMA

### **Key Agenda Topics**

- Higher octane fuel blends
- What's next for rail transport
- Mexican downstream markets
- West Coast refining landscape

- Role of the investment bank
- Future of rail transport
- Impact of the Panama Canal expansion
- And Much More!

### www.opisnet.com

301-287-2645 888-301-2645 (toll-free)