



Approaches to Market Oversight

Presented by

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Federal Energy Regulatory Commission

9th EU-US Energy Regulators Roundtable

October 3, 2011

Chicago, Illinois, USA



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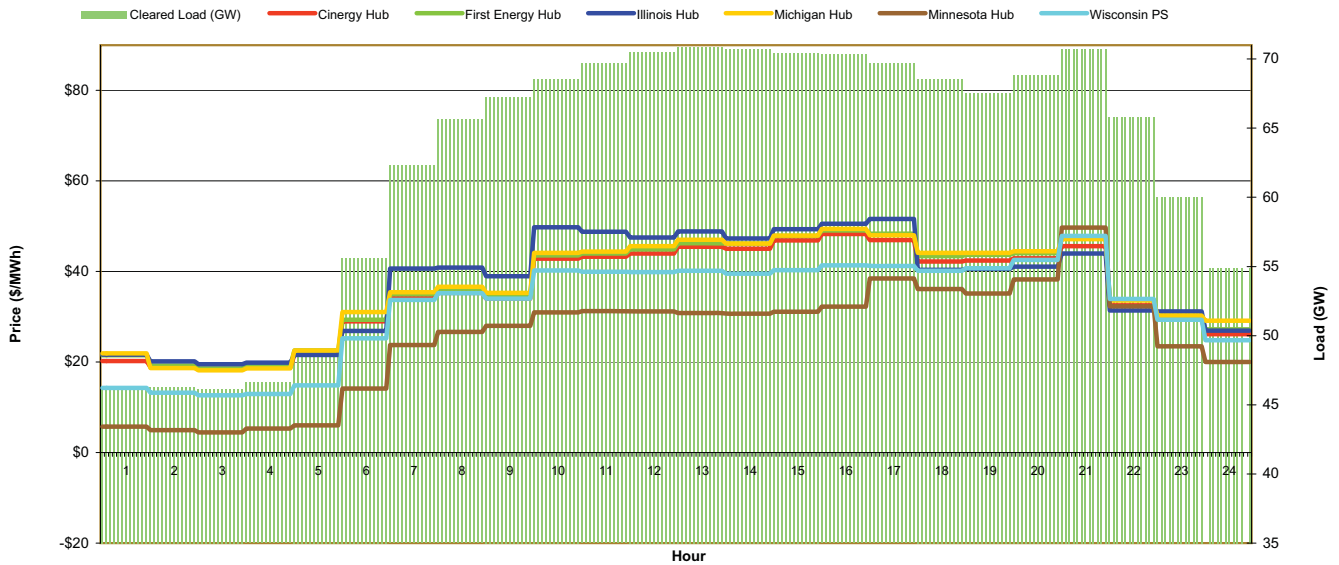
MISO Daily Report

Tuesday May 10, 2011

Price	<=0	>=100	>=200
Forecast Error %	0-4.9%	5-9.9%	>=10%

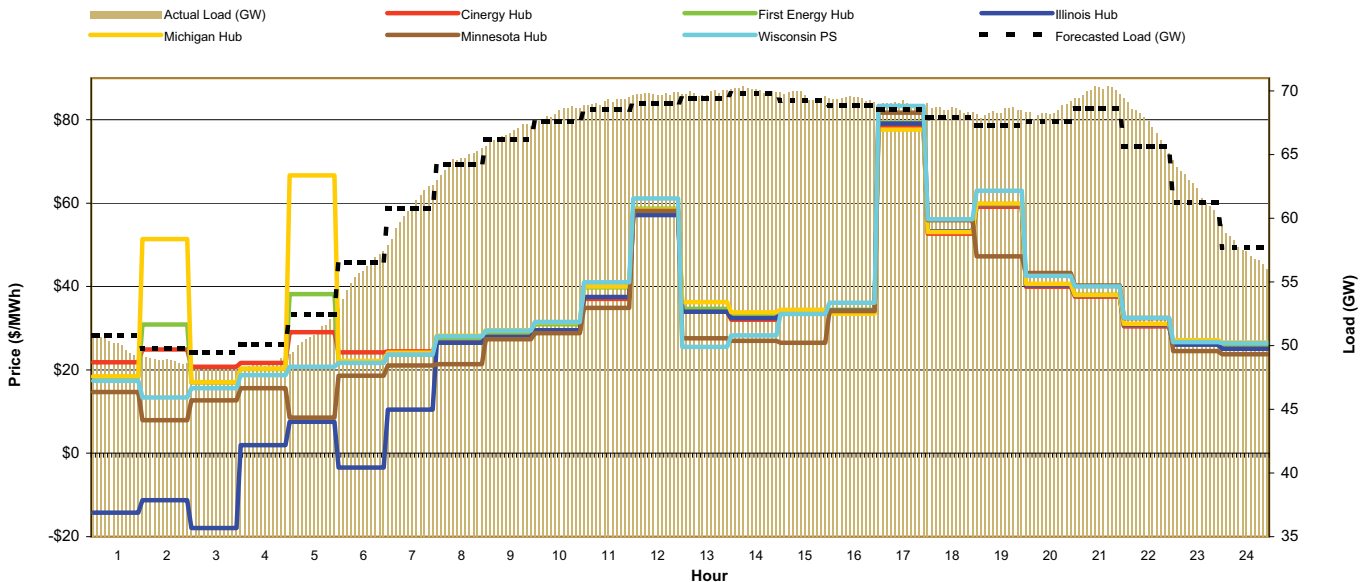
Day-Ahead Prices and Cleared Load

Hour Ending:																									Avg. Hr \$	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	All	On Pk
Cinergy Hub	20.20	18.90	18.32	18.74	21.63	29.00	34.11	35.28	34.00	42.85	43.25	44.00	45.44	45.06	46.90	48.29	46.97	42.20	42.45	42.90	45.58	32.56	29.55	26.15	35.60	41.71
First Energy Hub	21.49	19.24	18.57	19.08	22.58	29.37	34.98	36.19	34.83	43.58	43.95	44.89	46.27	46.18	47.90	49.10	48.38	43.41	43.71	44.03	47.20	33.77	30.25	27.22	36.51	42.73
Illinois Hub	21.66	20.14	19.55	19.88	21.60	26.86	40.67	40.85	38.96	49.78	48.76	47.49	48.84	47.33	49.35	50.54	51.64	40.37	40.57	41.06	43.99	31.41	31.19	26.94	37.48	43.88
Michigan Hub	21.92	18.67	18.21	18.59	22.56	31.03	35.42	36.64	35.28	44.10	44.43	45.62	47.04	46.18	47.93	49.44	48.04	44.12	44.11	44.49	47.19	33.58	30.26	29.16	36.83	43.03
Minnesota Hub	5.72	4.98	4.43	5.29	6.02	14.16	23.77	26.67	27.98	30.97	31.28	31.20	30.84	30.70	31.14	32.21	38.49	36.10	35.14	38.27	49.72	32.33	23.46	20.04	25.45	32.91
Wisconsin PS	14.27	13.23	12.66	12.96	14.86	25.22	33.71	35.19	34.03	40.23	39.95	39.86	40.13	39.54	40.34	41.39	41.23	40.19	40.75	42.54	47.88	33.95	29.36	24.82	32.43	39.16
Cleared Load (GW)	46.4	46.3	46.1	46.6	48.6	55.6	62.3	65.6	67.2	68.5	69.7	70.5	70.9	70.7	70.4	70.3	69.7	68.6	67.5	68.8	70.7	65.8	60.0	5.5		



Preliminary Real-Time Prices with Forecasted and Actual System Load

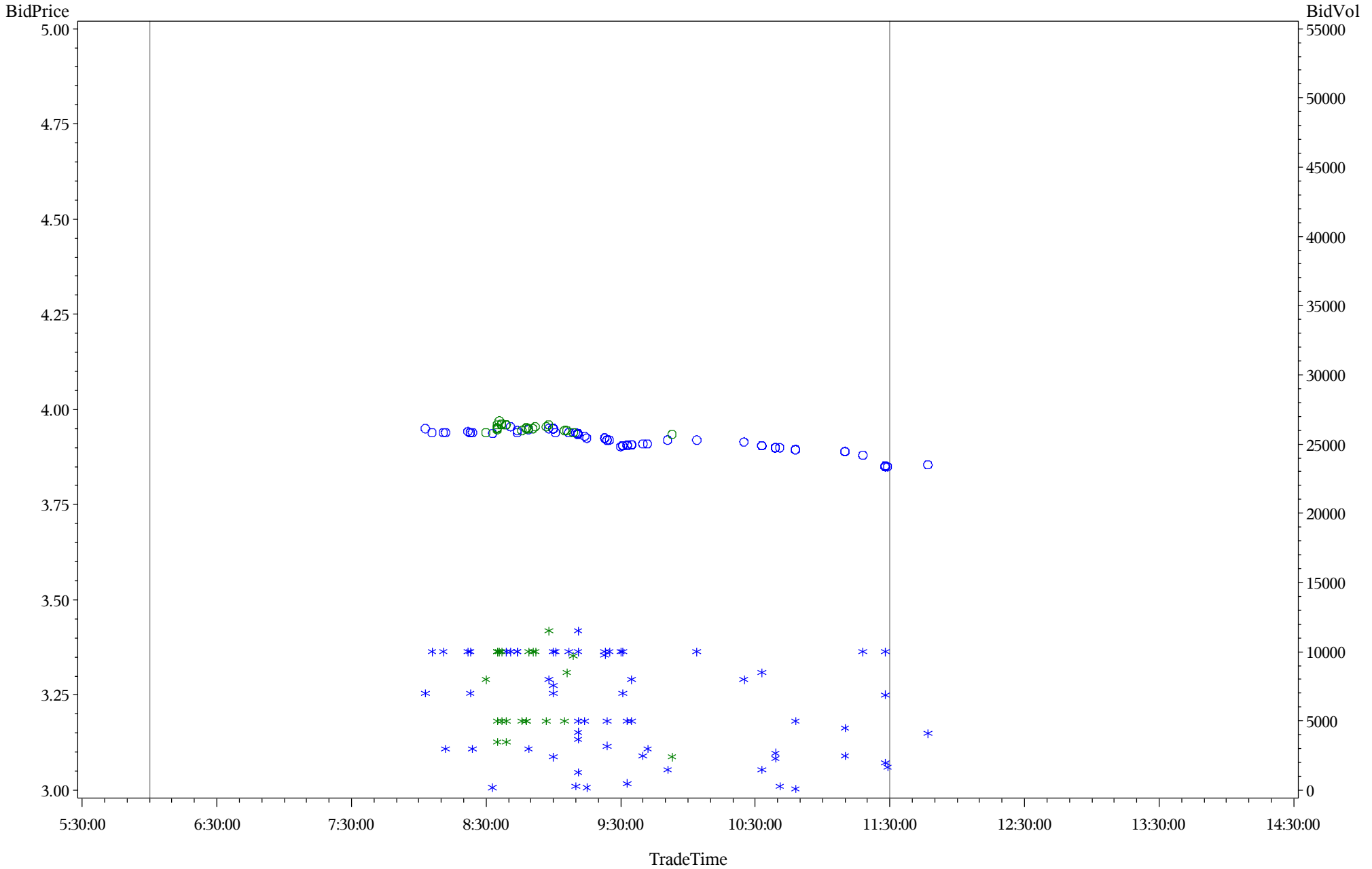
Hour Ending:																									Avg. Hr \$	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	All	On Pk
Cinergy Hub	21.83	24.88	20.73	21.66	29.02	24.23	24.41	26.76	28.15	29.50	37.00	57.47	33.96	32.08	33.71	33.95	78.35	52.66	59.11	39.98	37.55	30.41	26.26	25.14	34.53	39.81
First Energy Hub	18.34	30.89	16.97	20.19	38.16	21.78	23.69	27.61	28.94	30.95	39.80	58.70	34.63	32.88	34.22	34.39	79.29	53.18	59.69	40.52	38.01	30.78	26.70	26.16	35.27	40.64
Illinois Hub	-14.27	-11.28	-17.95	1.92	7.59	-3.44	10.51	26.48	27.91	29.48	37.49	57.12	33.96	32.40	33.99	34.22	79.12	53.25	59.79	40.30	37.91	30.82	26.08	25.08	26.60	40.02
Michigan Hub	18.48	51.38	17.04	20.28	66.67	22.12	24.17	28.24	29.54	31.41	40.02	58.48	36.26	33.80	34.40	33.52	77.65	53.06	59.91	40.64	37.95	31.05	27.10	26.60	37.49	40.81
Minnesota Hub	14.72	7.97	12.73	15.65	8.57	18.60	21.09	21.37	27.40	28.79	34.85	58.16	27.56	27.01	26.48	34.08	81.70	55.94	47.22	43.25	40.26	32.46	24.54	23.78	30.59	38.19
Wisconsin PS	17.41	13.40	15.63	18.77	20.79	21.69	23.71	28.06	29.43	31.47	41.01	61.14	25.50	28.28	33.40	36.13	83.32	56.17	62.95	42.57	40.04	32.54	26.66	26.43	34.02	41.17
Forecasted Load (GW)	50.8	49.8	49.5	50.1	52.4	56.5	60.8	64.2	66.2	67.6	68.5	69.0	69.4	69.8	69.2	68.8	68.5	67.9	67.3	67.6	68.6	65.6	61.2	57.7		
Forecast Error %	-1.7%	-2.0%	-2.6%	-3.0%	-2.6%	-1.0%	0.4%	0.7%	0.9%	1.1%	1.0%	0.6%	0.4%	0.5%	0.7%	0.8%	1.6%	1.3%	2.0%	2.2%	1.2%	-0.6%				



For archival records go to <http://www.ferc.gov/market-oversight/mkt-electric/miso/miso-iso-archives.asp>

Henry Hub Spot Gas ICE Deals: Prices (circles) and Volumes (stars)

Bid-posted (blue) and Offer-posted (green)
for trading day 16FEB11, lines mark index base



OE ENERGY MARKET SNAPSHOT

National Version – August 2011 Data

- **Southwest Outages and Curtailments Report**
- **Weather**
- **Electricity Markets**
- **Natural Gas and Fuel Markets**

Office of Enforcement
Federal Energy Regulatory Commission
September 2011



FERC's Market Manipulation Regulation: 18 C.F.R. §1c

- For wholesale electric and natural gas markets, it is unlawful for any entity, directly or indirectly, in connection with the purchase or sale of electric energy or natural gas or the purchase or sale of transmission or transportation services subject to the Commission's jurisdiction:
 - To defraud using any device, scheme or artifice (i.e. intentional or reckless conduct);
 - To make any untrue statement of material fact or omit a material fact; or
 - To engage in any act, practice or course of business that operates or would operate as a fraud or deceit.
- To be market manipulation, an action would also have to be done with the requisite ***scienter*** (intention or recklessness)

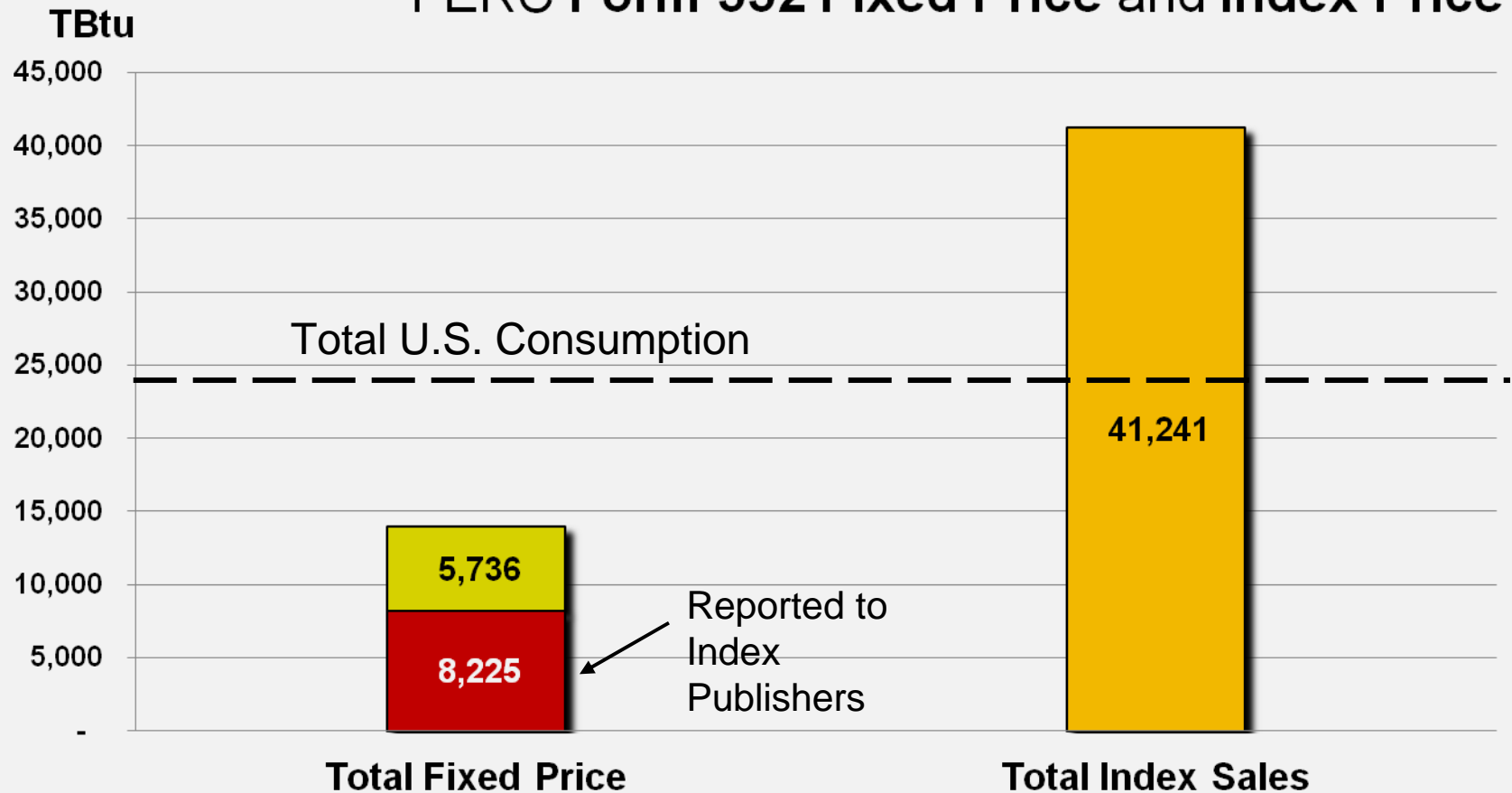


Physical Index Prices Rely on Relatively Few Fixed Price Deals

Source: FERC Form

552

FERC Form 552 Fixed Price and Index Price

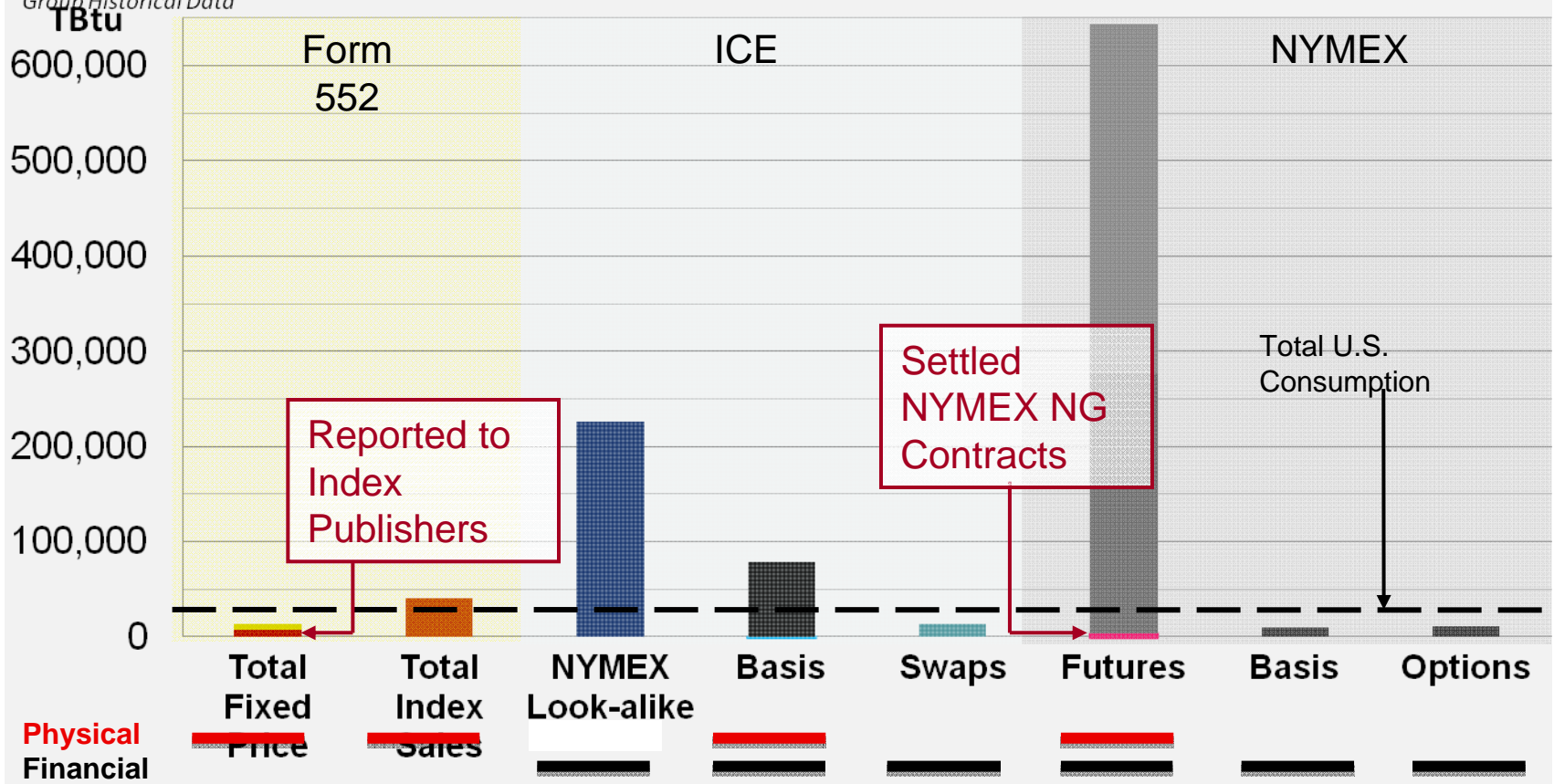




Financial Products also Derive Their Value from Relatively Few Sources

Source: FERC Form 552 ;
ICE
End of Day Reports; CME
Group Historical Data

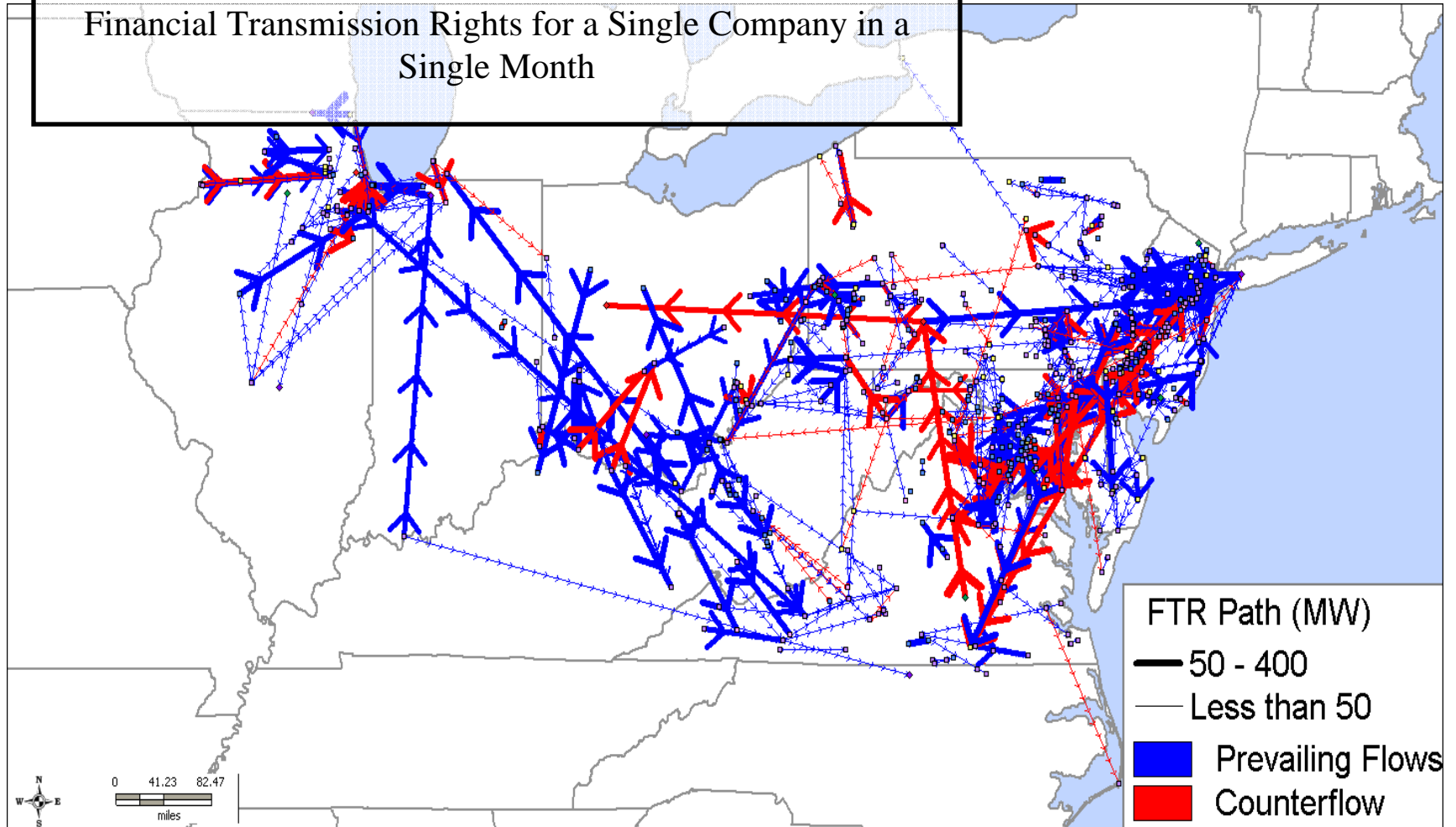
Form 552, NYMEX and ICE Natural Gas Products





The Market Is Complex

Financial Transmission Rights for a Single Company in a Single Month



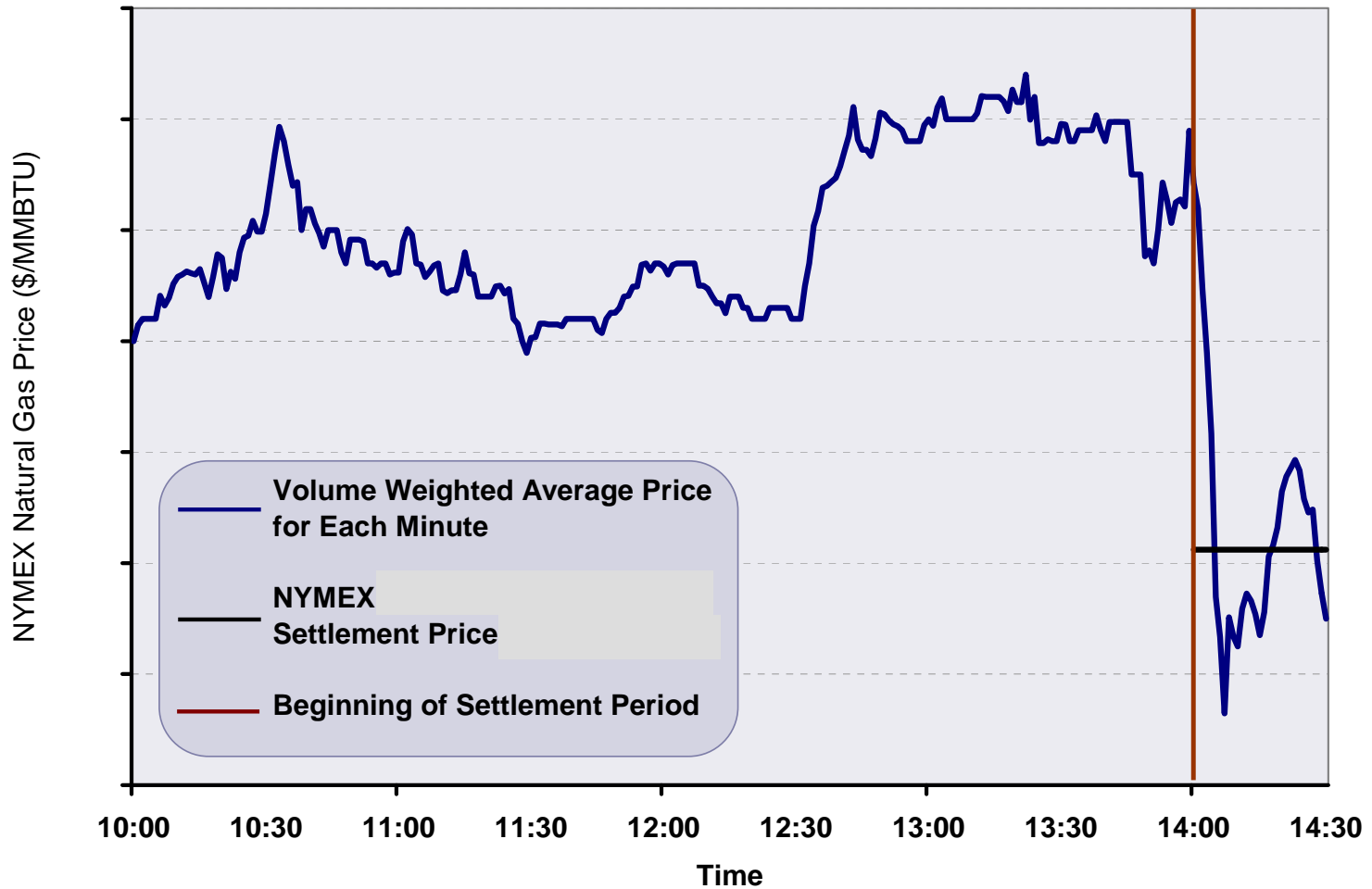


Areas of Interest

- Trading in the underlying of a derivative
- Sustained, seemingly irrational losses
- Ignoring the feedback of a competitive market
- Classic Leverage
 - Financial to Physical
- Leverage 2.0
 - Fixed price setting an index
- Failure to consider the actual economics of transactions
- Acting out the perverse incentive to buy as high as possible and sell as low as possible

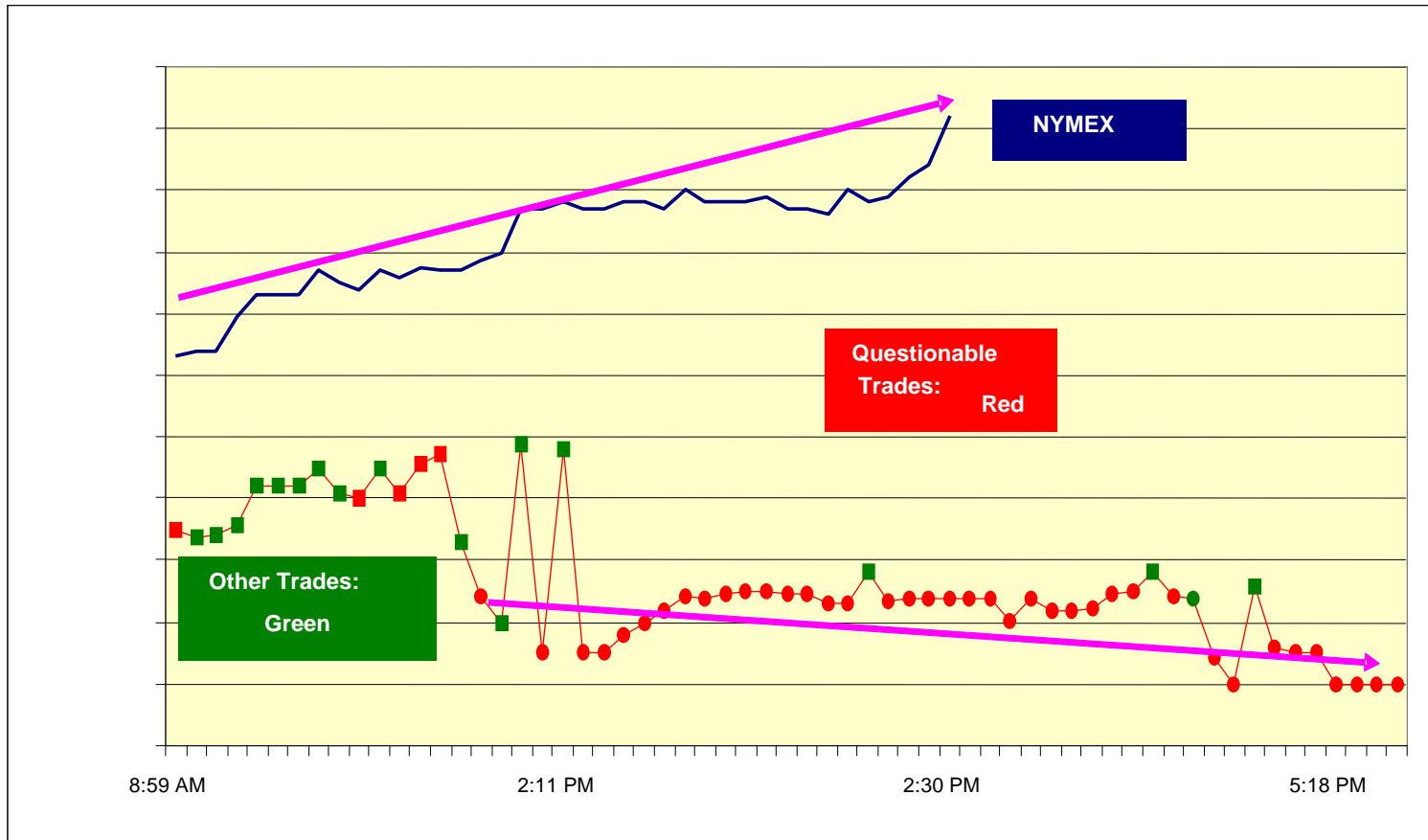


Nymex Trading on Contract Termination





Trading to Exploit a Spread

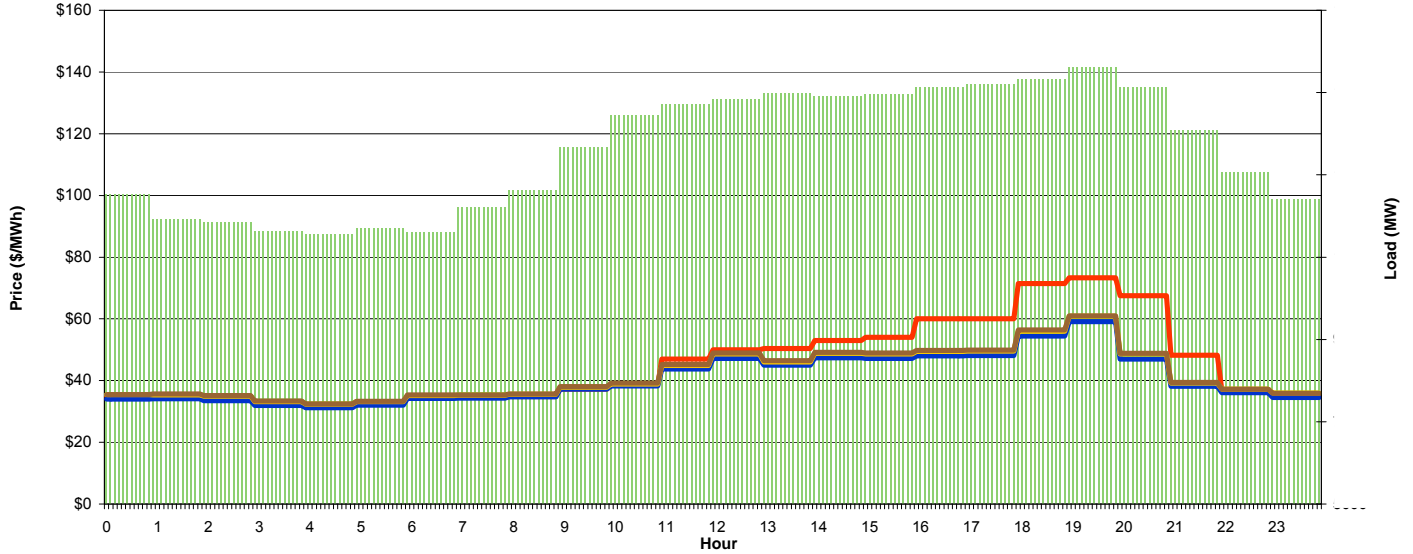




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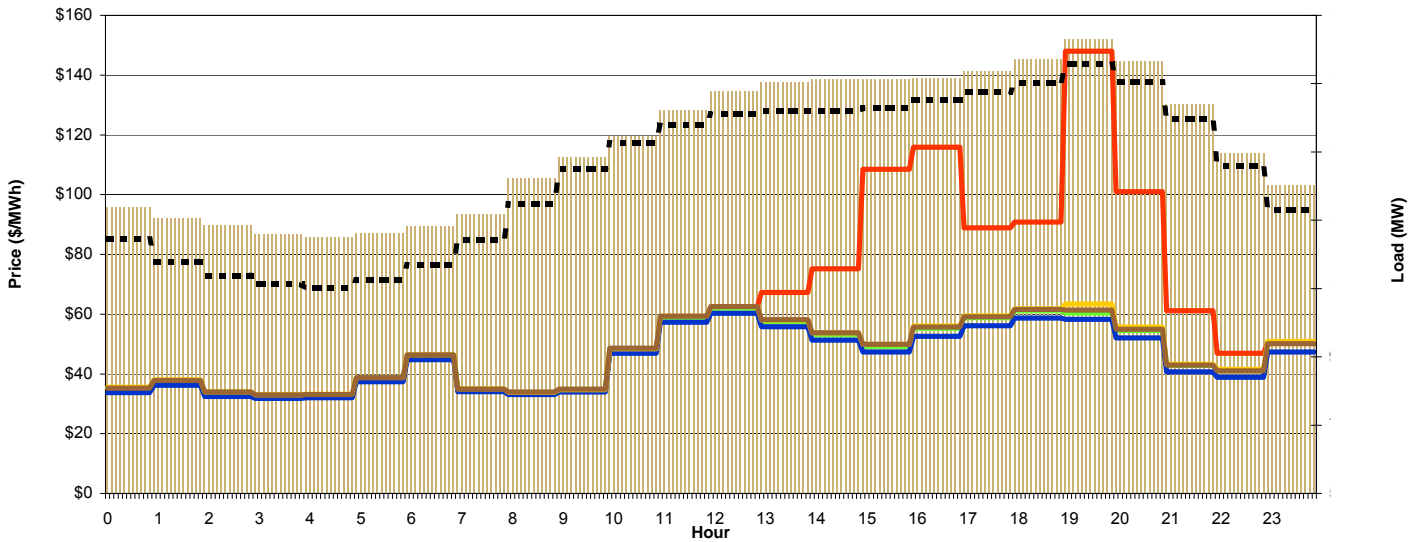
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Summary

- Market oversight at FERC entails:
 - Market monitoring: serving as a resource for market information
 - Surveillance: identifying market anomalies
 - Transaction analysis: assessing their causes
- The physical natural gas and electric markets can be targets of manipulation
 - One role of market oversight is to distinguish between benign occurrences and evidence of wrongdoing
 - Certain characteristics help determine which is which