

Electric Supply Contracts

Worst Pitfalls & Best Practices



Eoin Burke
Consultant
E-Quantum Consulting, LLC

Mike Ellis
Principal / Consultant
E-Quantum Consulting, LLC

TODAYS TOPICS

- 1. Qualifying any Energy Broker or Consultant**
- 2. Electric Procurement Contracts**
- 3. Reverse Auctions**
- 4. Demand Response (DR)**

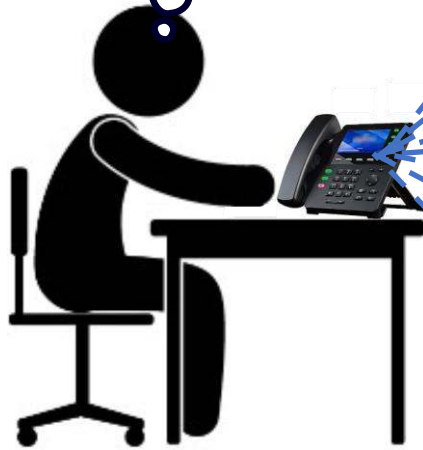
1. Qualifying an Energy Broker or Consultant





450 Energy Brokers & Consultants in IL

**You're all
the same**



Broker



“Consultant”



“Advisor”



**“Energy
Manager”**



“Risk Manager”



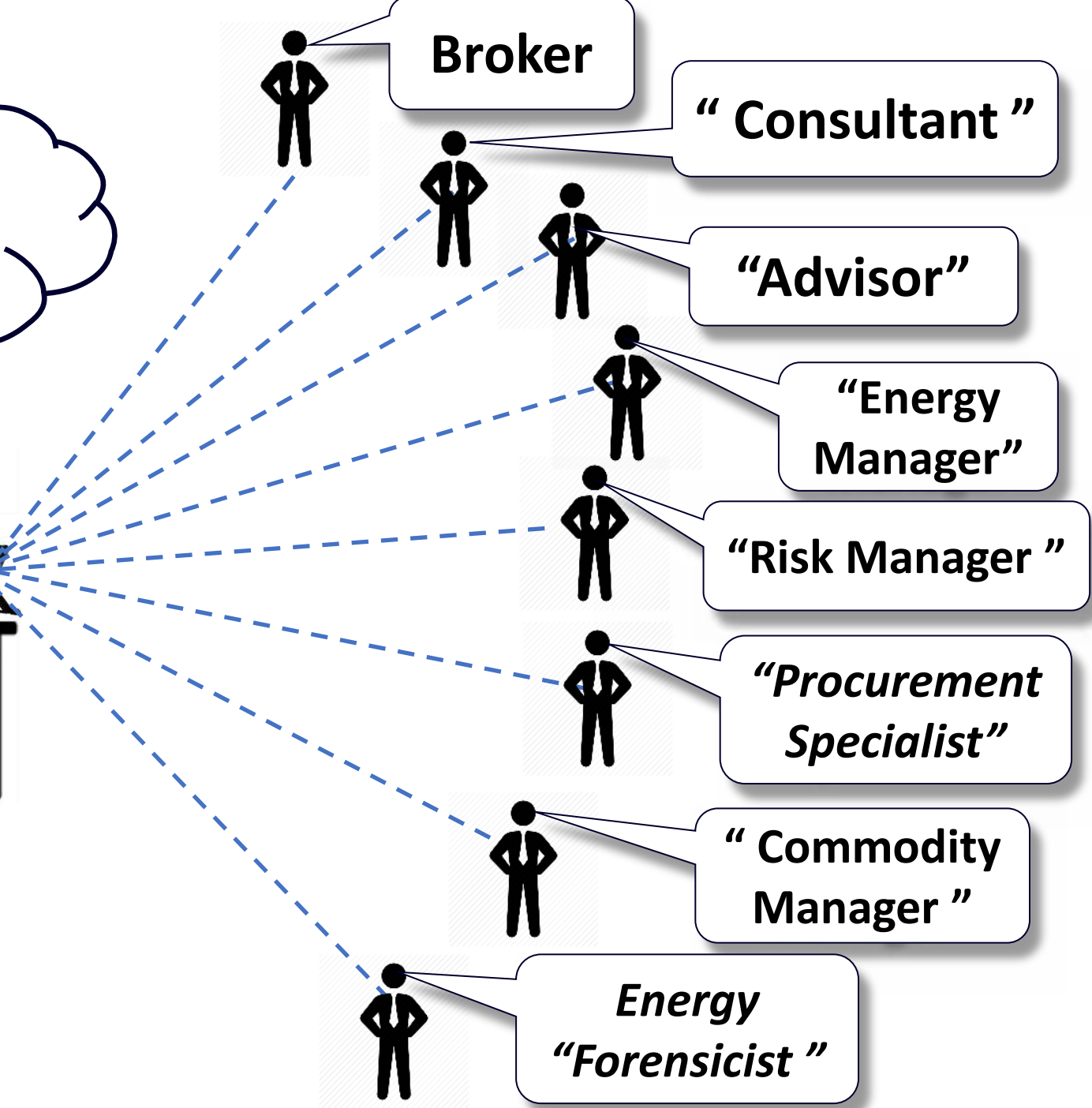
**“Procurement
Specialist”**



**“Commodity
Manager”**



***Energy
“Forensicist”***



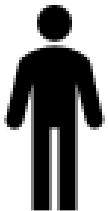
Need to First Find Out :

Independent

OR

**Non-
Independent**

YOU



1. What Does That Mean ?
2. Why Should I Care ?



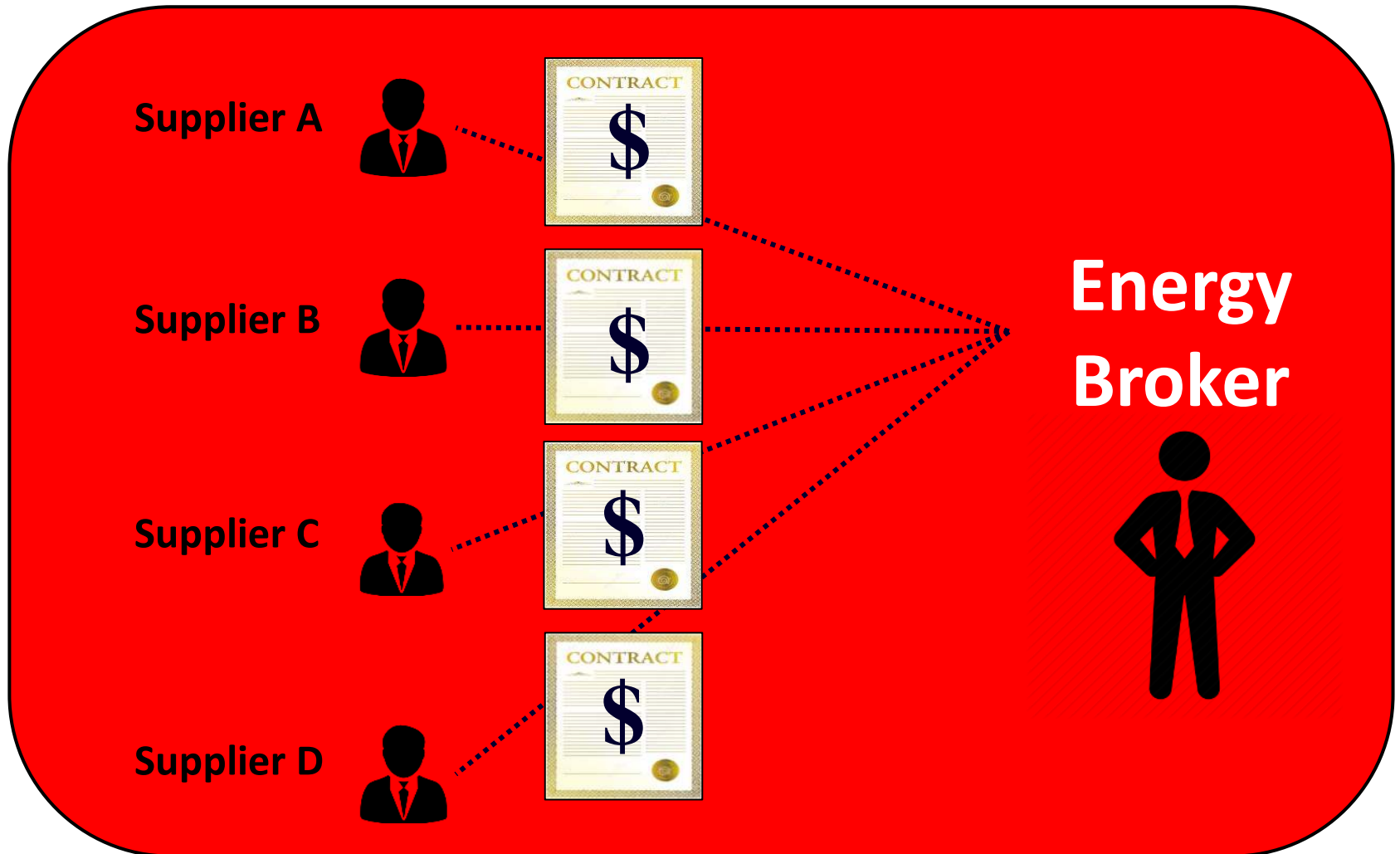
Definition per
State of Illinois

*“ not hold itself out as independent or
unaffiliated with any supplier...unless the
person...has no contractual relationship ”*

Public Act 096-1385

www.icc.illinois.gov/authority/agents-brokers-and-consultants

NON-Independent :



Advertised as “Independent”

OUR PROCESS IS RISK FREE

We work as an independent agent through energy suppliers buying **directly** from the wholesale market. If you sign with an energy supplier we represent,

Beware of these lies (real examples from energy broker websites)

_____ offers facility owners and operators a comprehensive integrated energy management program independent of any manufacturers or suppliers of energy related equipment or services. The purpose of the program establishes best practices across all energy

_____ is completely independent of any utility, energy commodity provider, or equipment supplier. A truly impartial total energy management company means we are able to configure and implement the best solution for our clients' unique energy requirements.

Utilizing a proprietary energy desk, our professionals blend market analytics and qualitative market factors to build a strategy to control members' energy costs over time. We ensure our energy management strategy remains current as market conditions change over time.

_____ is 100% independent, not affiliated with any energy supply company, and works solely on the behalf of its members.

Verification Tool :

icc.illinois.gov/utility/

Illinois Commerce Commission

Consumers Public Utility Transportation

Search

Home /

Entity Search

Entity Name

Authority Type

Search Clear

Enter broker's name and hit search

How to search with just 3 clicks (2 min)

<https://www.youtube.com/watch?v=UlcnhwNEpik&feature=youtu.be>

Required Disclosure :

ABC Report Form: To be submitted annually by March 31

ABC Annual Recertification under 83 IL Adm. Code 454

Section 454.110 Reporting Requirements

ORIGINAL

RECEIVED
MAR 18 2019
ILLINOIS COMMERCE COMMISSION
CHIEF CLERK'S OFFICE

a) Each licensee shall submit a report identified with the name of the ABC as it appears in the most recent Commission order granting the ABC a license.

Licensee Name:

ICC Docket # for current certification

**OFFICIAL FILE
ILLINOIS COMMERCE COMMISSION**

b) The annual report required by subsection (a) of this Section shall list **each** RES (Retail Electric Supplier) the licensee had any contractual relationship with during the prior calendar year, and shall contain the following information (**NOTE: #2 & #3 below should include customers for which RES paid the licensee's fee, and #4 & #5 should include customers for which customer paid the licensee's fee. Do not count the same customer(s) twice. If you need additional space, please attach additional sheets.**):

RES: AEP, Champion, Constellation, Direct Energy, Dynegy Energy, Energy.me, Entrust, Hudson, IGS, Kona, Mansfield, MC2, NextEra, Nordic Energy, Source Power

1) The type of contractual relationship (such as subcontractor, affiliate, commission compensated):

Commission Compensated

Hidden Data :

OFFICIAL FILE
ILLINOIS COMMERCE COMM

[Public Redacted Version]

ABC Annual (2019) Recertification under 83 IL Adm. Code 454

ORIGINAL

Section 454.110 Reporting Requirements

a) Each licensee shall submit a report of the most recent Commission order granting the license.

Licensee Name: [REDACTED]

ICC Docket # for current certification: [REDACTED]

b) The annual report required by section 454.110 (Electric Supplier) the licensee had during the year, and shall contain the following information:

customers for which RES paid the license fee. Do not count the same customer(s) twice. If you need additional space, please attach additional sheets.):

RES: [REDACTED]

1) The type of contractual relationship (such as subcontractor, affiliate, commission compensated):
[REDACTED]

the
CEIV
R 2 5 2019
MECE COM
LERK'S OFF
dar
e

**WOW! ...why
is this data
hidden ???**

Non- Independent ?

So WHY Do I Care ?



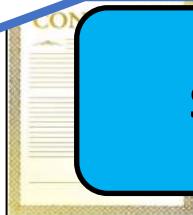
Supplier A



\$0.005

Anything above that we split

Supplier B



\$0.003

Supplier C



\$0.001
+\$18,000 upfront

Supplier D



\$0.002
+\$12,000 upfront

What fee will you allow me build in? (\$/kWh)

Broker



1. Unknown commission
2. Gag Order
3. Non-compete clause
4. Double Dipping
5. Bidding Manipulation



The Missing KEY :

The Commission Contract

NON-EXCLUSIVE BROKER AGREEMENT

This Non-exclusive Broker Agreement ("Agreement"), executed this [] day of [], 2018 ("Effective Date") is entered into by and between Supplier, a corporation organized and existing under the laws of the State of Illinois, with its principal office located at 75 West Main, Suite 20, Chicago, IL 60601, and [] at [] ("Broker"). Supplier and Broker are sometimes collectively referred to in this Agreement as the "Parties" and are sometimes individually referred to as a "Party".

RECITALS

WHEREAS, SUPPLIER is a Licensed Alternative Retail Electric Supplier of electricity.

WHEREAS, Broker is a Licensed Broker under Illinois law.

8. CONFIDENTIALITY. Except for matters of public record, information already within the other Party's possession prior to entering into this Agreement, and except to the extent required (through deposition, interrogatory, request for production, subpoena, civil investigative demand or similar process) by a court order, both parties agree to keep confidential all information, including but not limited to, Suppliers detail pricing and structures, Suppliers Retail Electricity Supply Agreements, the Non-Exclusive Broker Agreement, Broker commissions, Suppliers sales and marketing materials and any data collected hereunder, unless expressly agreed to in writing by either party.

- c. Broker shall maintain the confidentiality of any information that Broker receives through or as a result of this Agreement or Broker's involvement with SUPPLIER regarding pricing, products, and activities of SUPPLIER, except to the extent such information is required to be divulged in order for the Parties to negotiate the Customer Agreement or in order for SUPPLIER to perform its obligations hereunder;
- d. Broker shall abide by all applicable privacy policies of SUPPLIER;
- e. Broker understands that the pricing/contracting process for any residential customer or commercial customer with annual consumption under 15,000 kWh is different and subject to the processes outlined in the Supplier training documents.
- f. Broker shall not amend, supplement, alter, modify or accept waivers to any Customer Agreement, marketing materials, any of the rates for the electricity, or any other forms or documents (or any condition or provision of a form or document) provided to Broker by SUPPLIER; and
- g. Notwithstanding any provision contained herein to the contrary, it is specifically understood between the Parties that Broker is not representing SUPPLIER in any negotiations or discussions relating to any Customer Agreement.



The Missing KEY :

The Commission Contract

Broker Confirmation Schedule

Broker Name Electric Broker
Contract ID 123321
Customer Name Acme Manufacturing
Contract Start Month 4/2019
Contract End Month 12/2019

Account Number	Site Location	Estimated Usage kWh	Cycle Start	Cycle End	Broker Commission Rate \$/kWh
0146503102	1255 W Bt Ave	114,872	04/15/2019	12/12/2019	\$0.00400
9169914404	1255 W Bt Ave	190,182	04/29/2019	12/30/2019	\$0.00400
1406802500	1255 W Bt Ave	118,311	04/19/2019	12/18/2019	\$0.00400
6433503603	1255 W Bt Ave	12,531	04/17/2019	12/16/2019	\$0.00400
0531851803	1255 W Bt Ave	12,632	04/12/2019	12/11/2019	\$0.00400

Signature _____
Print Name _____
Title _____
Date _____

Broker: Electric Broker
Signature _____
Print Name _____

YOU pay the hidden commission

Bid Price Manipulation

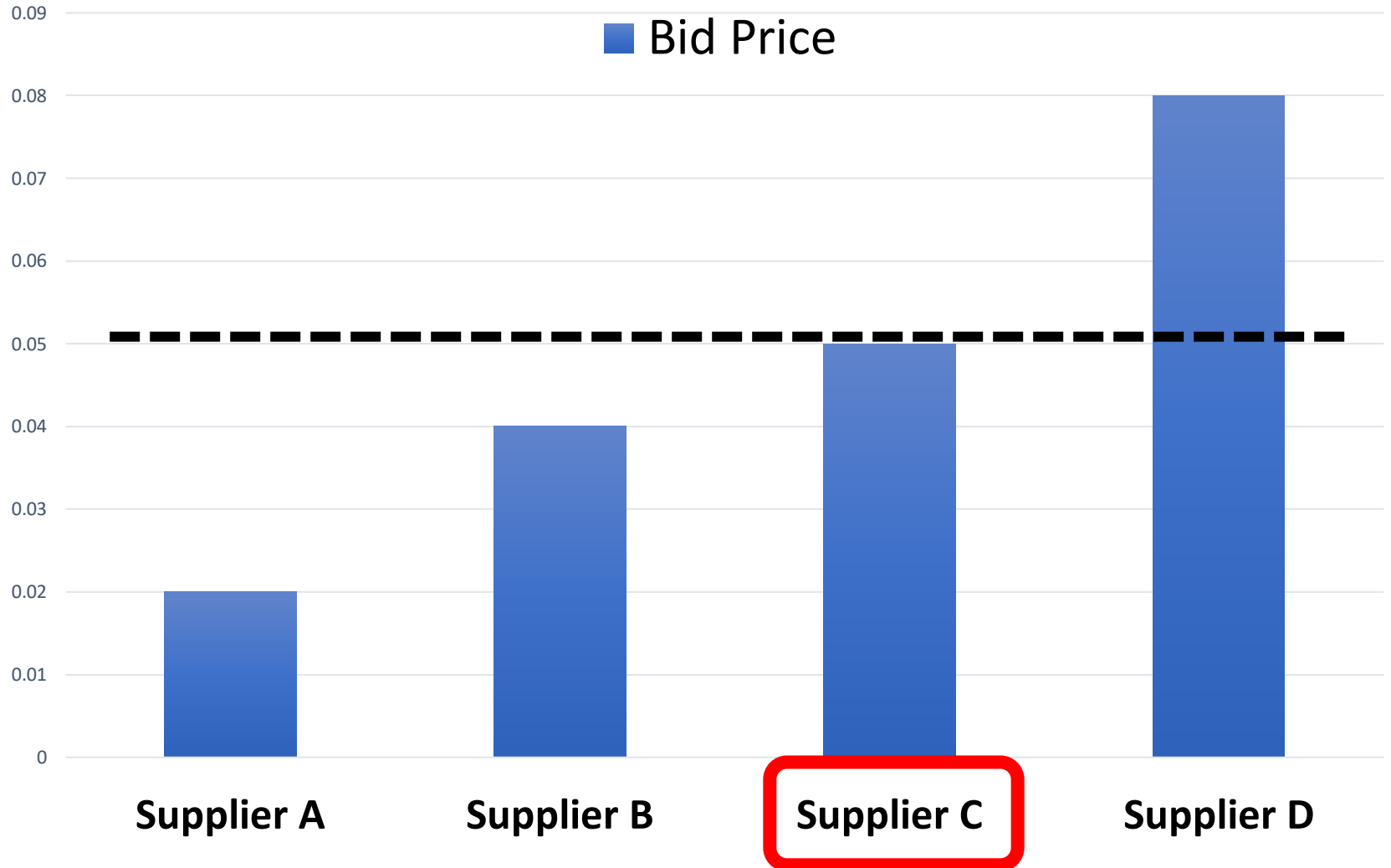
Supplier C



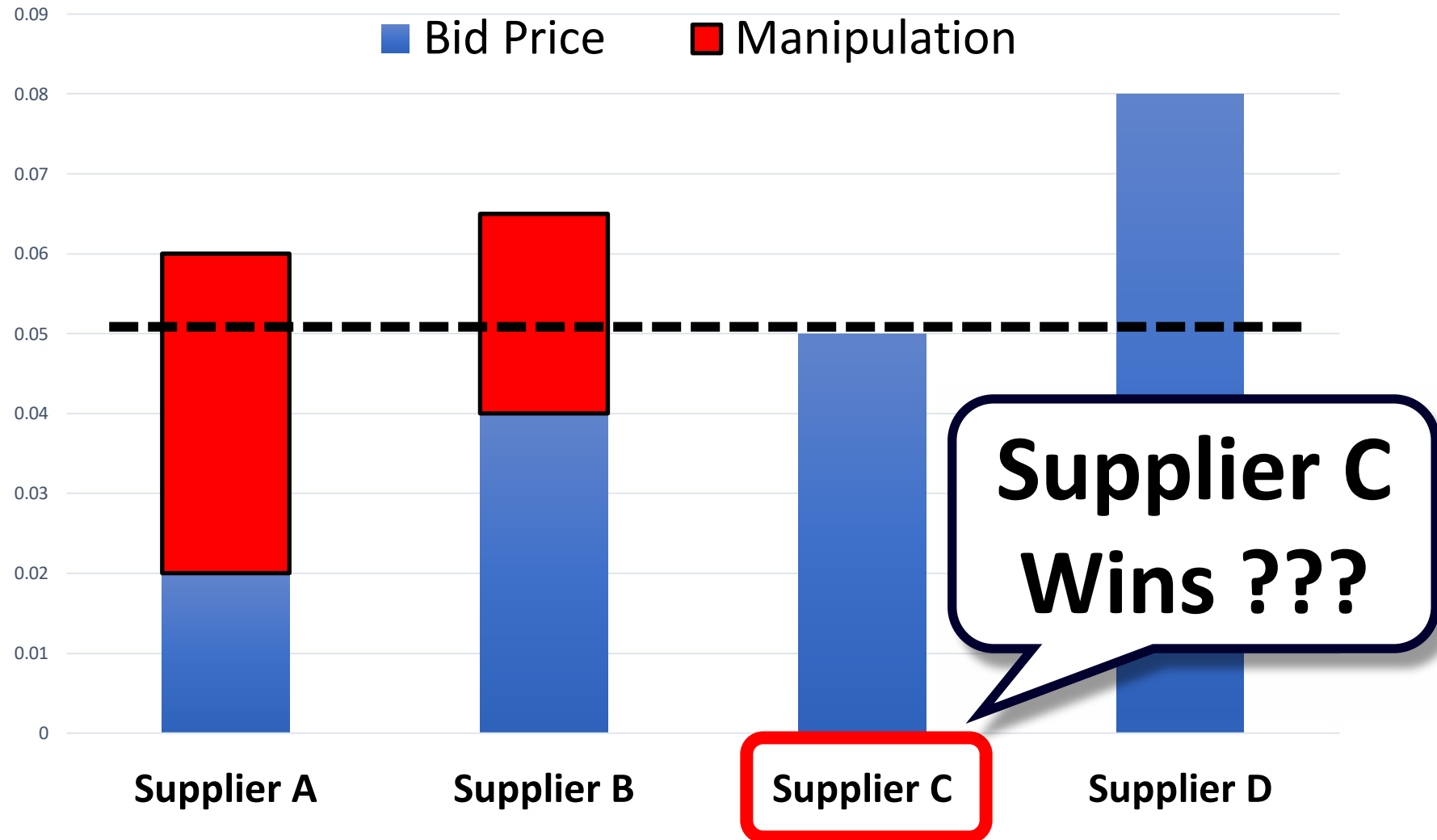
\$0.001

+\$18,000 upfront

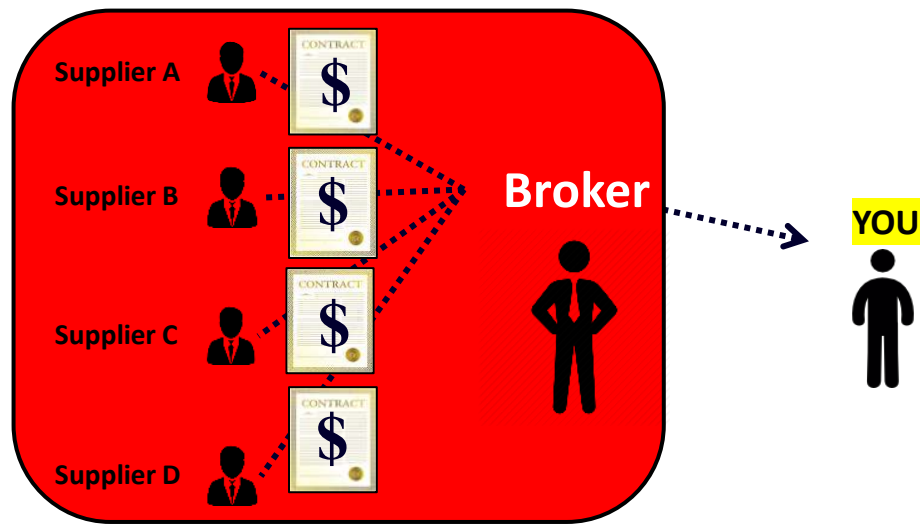
Bid Price Manipulation



Bid Price Manipulation



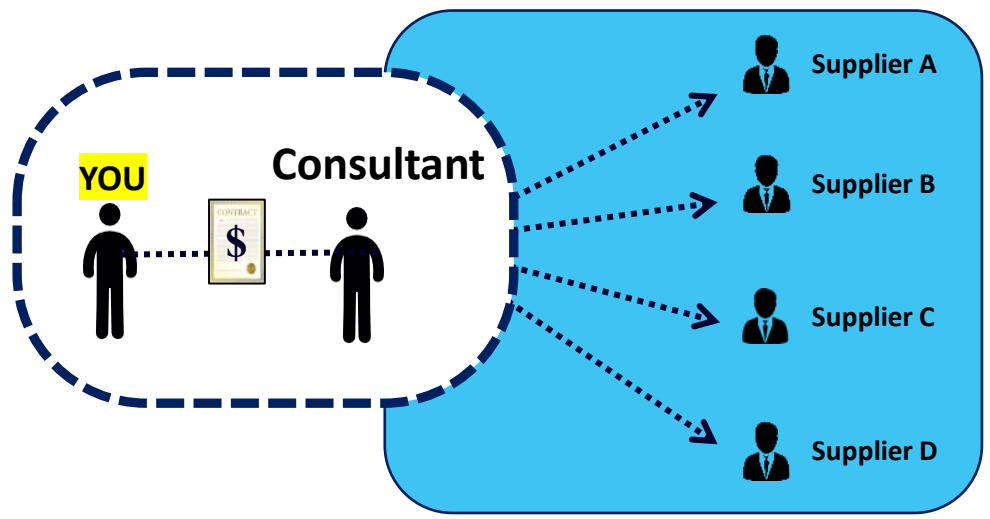
NON-INDEPENDENT



 **WRONG WAY**

- 1. Conflict of interest
- 2. Commission Unknown
- 3. Higher Rates
- 4. Double dipping risk

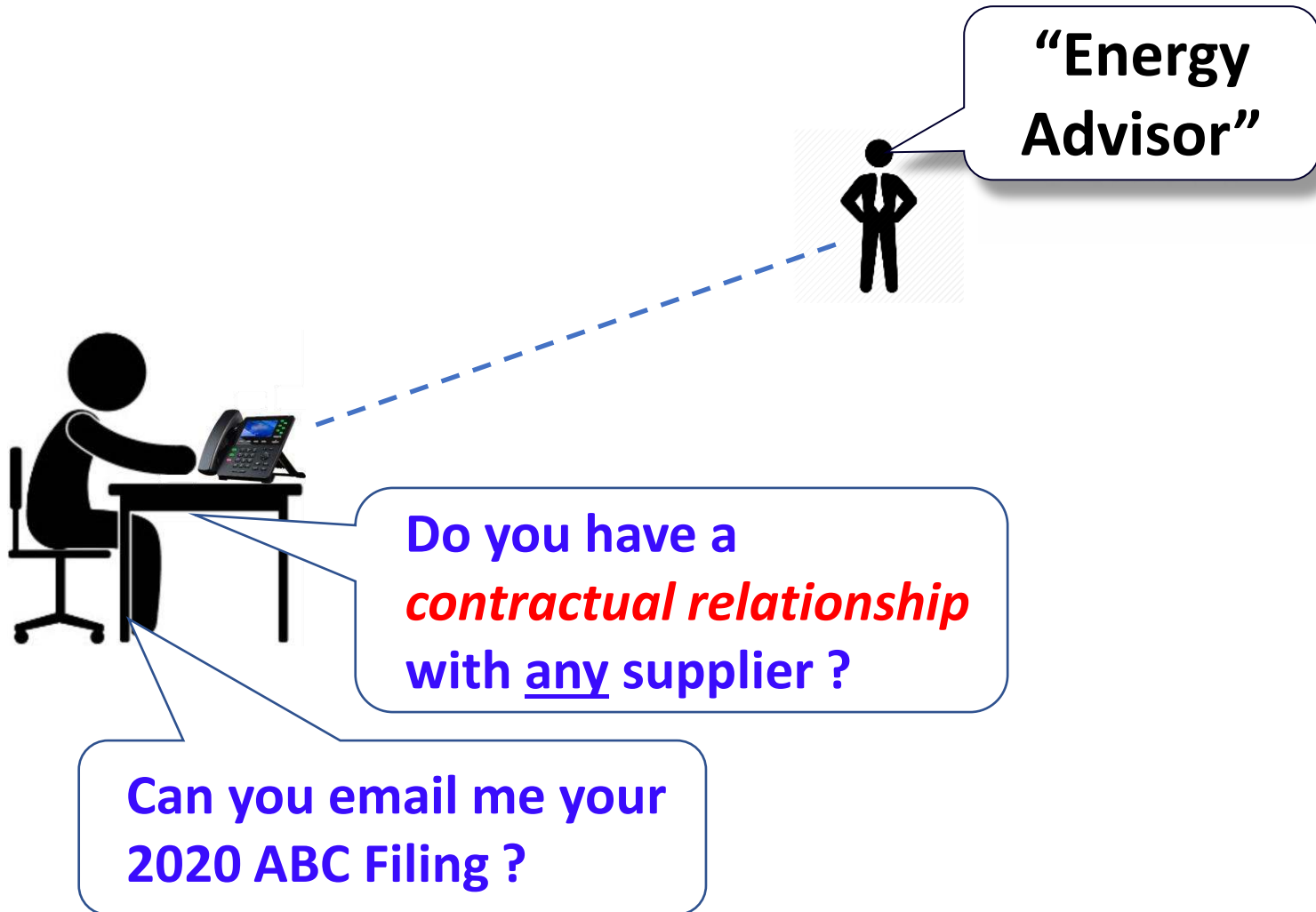
INDEPENDENT



 **RIGHT WAY**

- 1. Unbiased advice
- 2. No contract with suppliers
- 3. Flat fee

Qualifying Questions





ANY
QUESTIONS
?

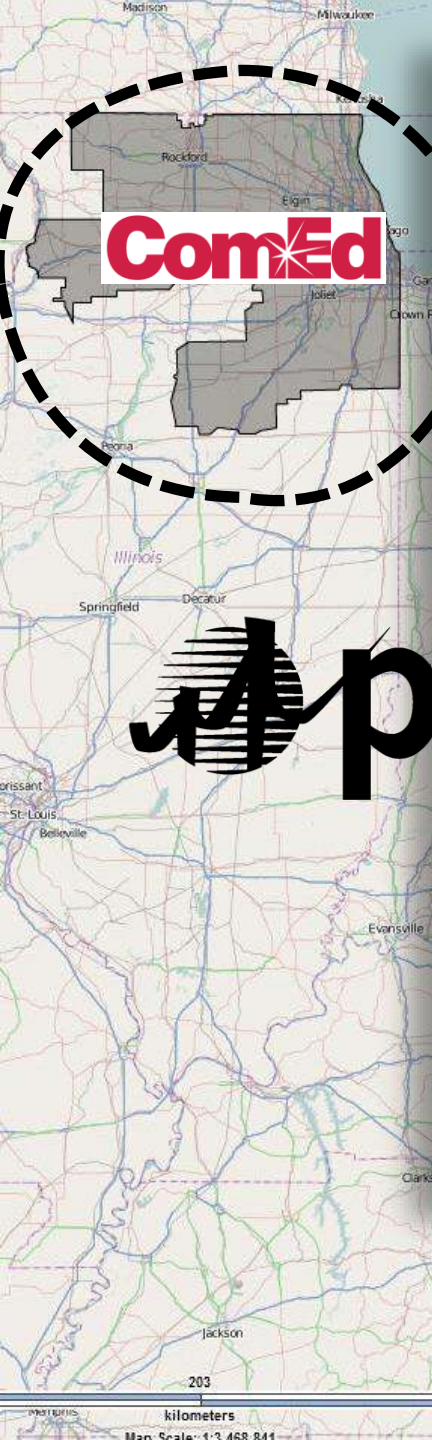
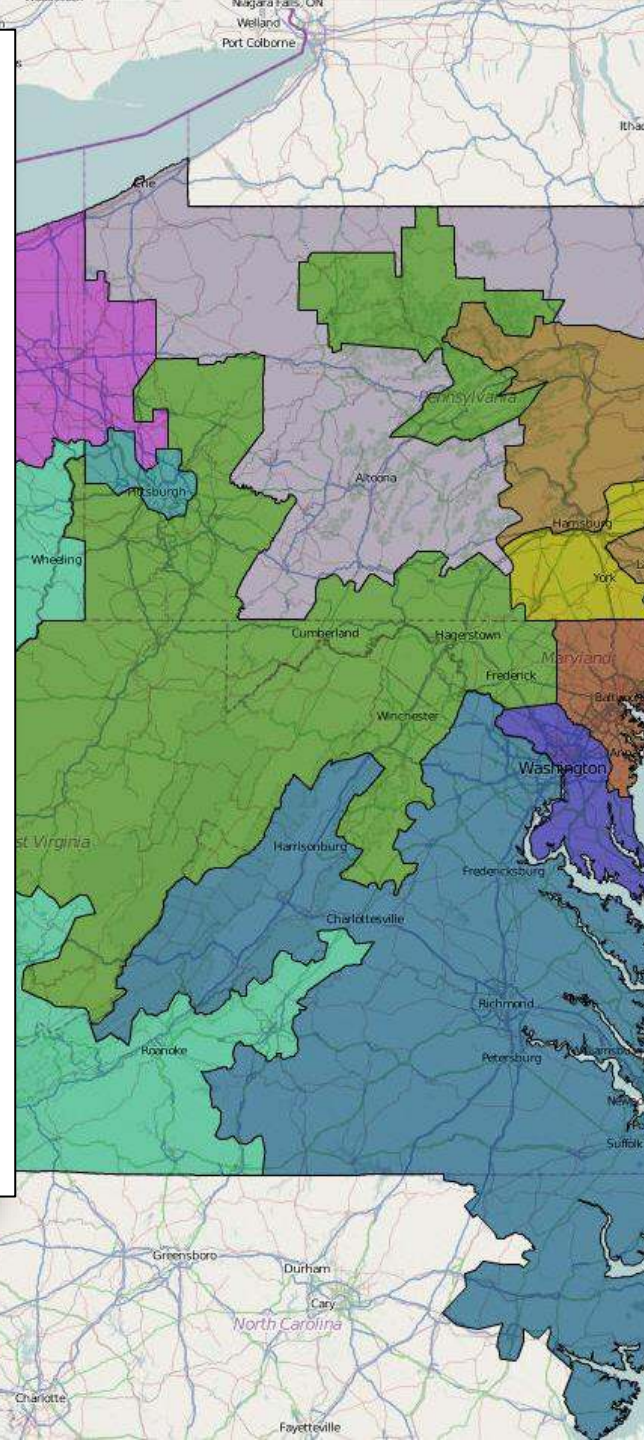


PJM TARIFF

YOUR TARIFF COSTS

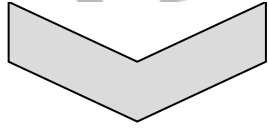
Capacity	kW
Transmission	kW
Ancillary	kWh
Losses	kWh
ARR/ML Credits	kWh
RPS	kWh

Effective Date: 9/17/2010 - Docket #: ER10-2710-000 - Page 1

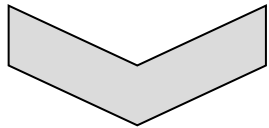


0 203 406 kilometers

Map Scale: 1:3,468,844



YOUR TARIFF COSTS	
Capacity	kW
Transmission	kW
Ancillary	kWh
Losses	kWh
ARR/ML Credits	kWh
RPS	kWh

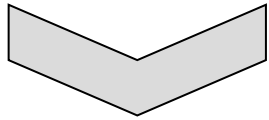
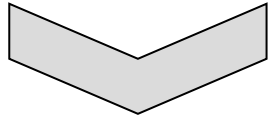
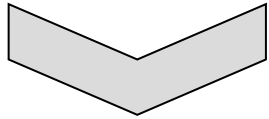


Energy Supplier

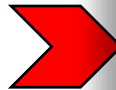


**Follow
Tariff !**





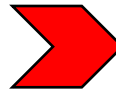
**Energy
Supplier**



ELECTRIC BILL

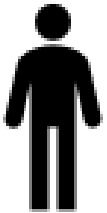
YOUR TARIFF COSTS	
Capacity	kW
Transmission	kW
Ancillary	kWh
Losses	kWh
Allow/ML Credits	kWh
RPS	kWh

**NOT OBLIGATED
to follow Tariff !**



**+ Add Margin
+ Upcharges
+ Custom fees**

YOU





ANY
QUESTIONS
?

The energy broker's favorite
(and most profitable option)

Bundled Electric Rates

(a.k.a all-Inclusive rates)

Energy	kWh
Capacity	kW
Transmission	kW
Ancillary	kWh
Losses	kWh
ARR/ML Credits	kWh
RPS	kWh

Bundled All-Inclusive
“Fixed” \$/kWh

- Deviates from PJM Tariff
- Energy (commodity) is unknown !!
- Unfair risk exposure

Bundled Example *(partially itemized)*

Day Ahead Energy - 1,710,351.3223 kWh Total @ \$0.028947/kWh

Fixed Adder - 1,710,351.3223 kWh Total @ \$0.01961/kWh

Loss Charges - 1,710,351.3223 kWh Actual @ \$0.00207/kWh

STILL bundles

1. Index Adder (*unknown*)
2. Capacity (*unknown*)
3. Transmission (*unknown*)
4. Ancillaries (*unknown*)
5. RPS (*unknown*)
6. Credits (*unknown*)



“Fixed”



RMR Costs are also included in the contract. change if there is a change in law, as defined in "Fixed" or "Pass Through" herein, Capacity Costs Agreement.



“Fixed”

Costs listed above as "Fixed" may be subject to change notwithstanding any notation of Capacity Costs as "Fixed" to the extent applicable during the term of this Agreement.



Also, if Buyer has a change in use
increases to Buyer. If
costs in a commercially reasonable
the payment terms of this Agreement

may pass through the resulting cost
will calculate the amount of such
will be due and payable pursuant to

“Fixed”



SECTION 5a: Vari
5a.1 Changes may pass through
any associate mp.
5a.2 Material through any
additional co Change to the
Customer w

“Fixed”





“Fixed”

Risk Exposure to **UPCHARGES**

Payments and Adjustments	
NITS Adjustment Debit on 01/30/17 February 2017	\$1,588.02
NITS <u>Rate Adjustment</u>	\$3,315.88
Capacity Adjustment Debit on 01/30/17 February 2017	
Capacity <u>Rate Adjustment</u>	
NITS Adjustment Debit on 01/30/17 January 2017	\$1,758.17
NITS <u>Rate Adjustment</u>	

**Energy
Supplier**

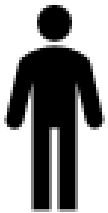


That's just a “pass-thru”

**Don't accept this
poor excuse.**

So are cost **REDUCTIONS**
a pass-thru also?

YOU



EXAMPLE : kW charge **REDUCTIONS**

The screenshot shows the ComEd website interface. The top navigation bar includes the ComEd logo (An Exelon Company), the slogan "powering lives", and links for "Español" and "Contact Us". The main navigation menu on the left includes "My Account", "My Bill & Usage", "My Service", "Start Stop Move", "My Appointments", "Construction & Remodeling", and "Customer Choice". The main content area is titled "View Account Usage Data" and features a "Select Account Number:" section with a table of account details. A callout box highlights a "kW Decrease = - 315 kw". Another callout box highlights a "Cost Reduction = \$26,941 But.....". A large "kW" text is overlaid on the left side of the screenshot.

Capacity PLC	Start Date	More
2941.046700	06/01/2019	+
2626.705400	06/01/2020	+

Network Service PLC	Start Date	More
2743.685000	01/01/2020	+

kW Decrease
= - 315 kw

kW

Cost Reduction
= \$26,941 But.....

EXAMPLE : kW charge **REDUCTIONS**

SECTION 5a: Variations

5a.1 Changes in Law. If a Change in Law occurs, Supplier **may** pass through any associated costs or **credits** to the Customer without markup.

5a.2 Material Change. Supplier reserves the right to pass through any additional costs incurred by Supplier as a result of Material Change to the Customer without markup.

...Supplier **KEEPS** benefit !!



ANY
QUESTIONS
?

CHANGE creates RISK

Change in usage(kWh)
and demand(kW)

ComEd powering lives
An Exelon Company

My Account Outages Ways to Save

Home > My Account: My Service > Customer Choice

Bill & Usage + Select Account Number:

Service - Capacity PLC Start Date

Stop Move 1531.135800 06/01/2020

Appointments Network Service PLC Start Date

1389.541300 01/01/2020

kW

ComEd powering lives
An Exelon Company

Outage | Pay Bill | Moving | Español | Contact Us

Rate**	End of Billing Period	Days in Billing Period	Total KWH Usage	On-Peak KWH Usage	Off-Peak KWH Usage	Billing Demand (KW)	Monthly Peak Demand (KW)
R76	02/21/2019	29	1637296	0	0	3,963.76	4,092.16
R76	01/27/2019	31	1589615	0	0	3,654.24	4,428.00
R76	11/09/2018	30	1397264	0	0	2,863.19	4,217.31
R76	11/18/2018	30	1052473	0	0	2,796.36	3,888.02
R76	10/19/2018	30	826816	0	0	2,498.69	2,983.79
R76	09/19/2018	30	978649	0	0	3,803.29	3,803.29
R76	08/20/2018	29	947283	0	0	2,685.71	3,261.12
R76	07/22/2018	30	1033307	0	0	3,039.33	3,186.99
R76	06/22/2018	32	942243	0	0	2,811.08	3,359.84
R76	05/21/2018	27	670135	0	0	2,415.88	2,562.13
R76	04/24/2018	29	986010	0	0	3,066.65	4,012.76
R76	03/26/2018	33	1210714	0	0	2,603.99	3,627.43
R76	02/21/2018	29	1333328	0	0	3,855.08	4,686.20
R76	01/23/2018	35	1929517	0	0	3,916.95	4,463.42
R76	12/19/2017	33	1247922	0	0	2,824.61	4,178.41
R76	11/16/2017	24	867086	0	0	2,483.58	3,979.57
R76	10/23/2017	34	1080776	0	0	2,769.41	3,101.43
R76	09/19/2017	28	813220	0	0	2,444.51	2,528.11
R76	08/22/2017	30	1016149	0	0	2,643.70	3,048.69
R76	07/23/2017	32	1054926	0	0	2,827.02	3,313.40
R76	06/21/2017	30	908477	0	0	2,814.11	3,080.49
R76	05/22/2017	29	808641	0	0	2,574.24	2,964.79
R76	04/23/2017	31	942789	0	0	2,470.07	2,987.03

kWh

CHANGE is CONSTANT

	kWh	kW
• Weather (<i>hot/cold</i>)	✓	✓
• Occupancy (+/-)	✓	✓
• Equipment (+/-)	✓	✓
• Construction	✓	✓
• EE projects	✓	✓

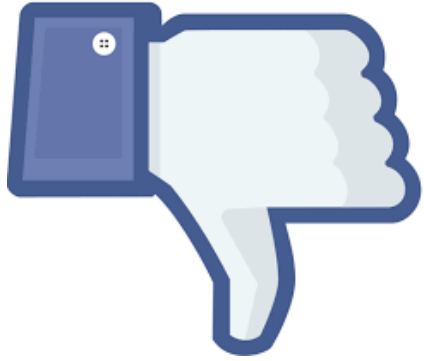
Bundled rates
REDUCE payback

RISK is CONSTANT

- Risk of upcharges
- Risk of no cost reductions

Energy	kWh
Capacity	kW
Transmission	kW
Ancillary	kWh
Losses	kWh
ARR/ML Credits	kWh
RPS	kWh

Bundled All-Inclusive
“Fixed” \$/kWh



Bundled Rates *(All-Inclusive)*

1. Not “Fixed”
2. Cost More *(a premium)*
3. High Risk Exposure *(to upcharges)*

It's the Supplier/broker's Favorite

**Highest profit,
fees easily hidden**



ANY
QUESTIONS
?

Reverse Auction Problems

What's behind the curtain ?

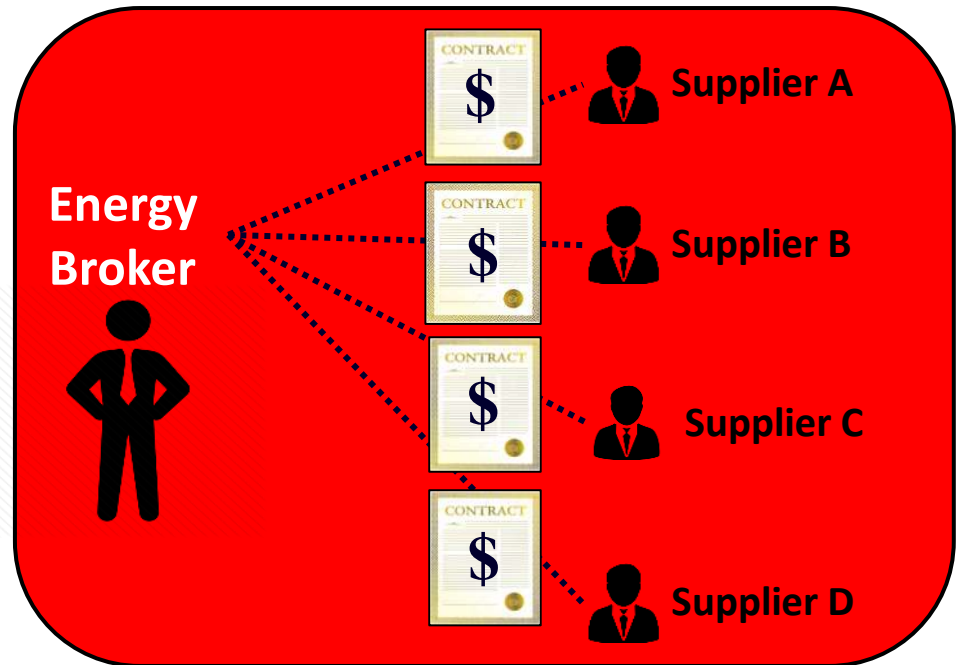
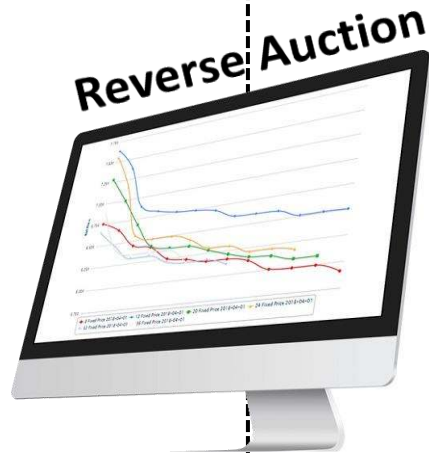
Reverse Auction



Reverse Auctions are run by...

Non-INDEPENDENT brokers

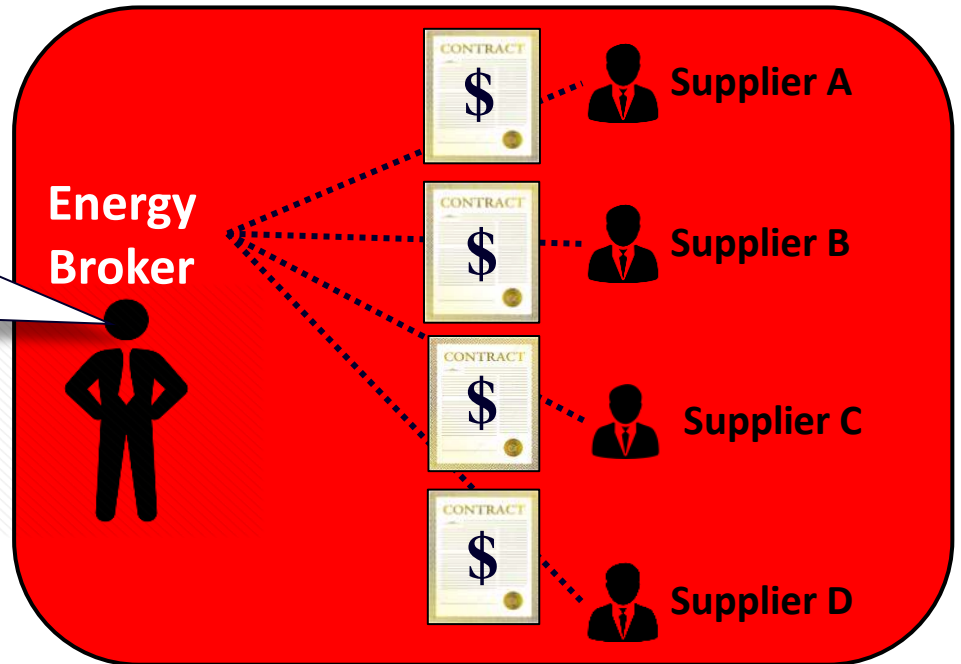
YOU



- **UNKNOWN** commission
- **YOU** pay for it
- **HIGHER** rate

Non-INDEPENDENT brokers

Okay fine, I'll just charge a "flat" fee



**BEWARE OF
DOUBLE
DIPPING**

Broker asks for "flat" fee AND quietly takes a hidden commission too

Illinois Study : Reverse Auctions

IGEN Energy Report

A COMPREHENSIVE ANALYSIS OF ILLINOIS COMMUNITY COLLEGE ENERGY USE,
ENERGY PROCUREMENT, RENEWABLE ENERGY APPLICATIONS, AND
OPPORTUNITIES GOING FORWARD



Illinois
Department of Commerce
& Economic Opportunity

Pat Quinn, Governor

- **Reverse Auctions.** The Reverse Auction approach is held on a specified date and offers (but not the identities) of the other bidders and posting gradually lower bids until the auction period.

The Reverse Auction approach presents some advantages:

- **Transparency.** Pricing submittals are transparent and recorded.
- **Automation.** The process allows the buyer to request pricing for different time periods and to automate evaluation.

Some challenges:

Price. Suppliers approach all bidding opportunities with their own absolute lowest price which is based on the pricing variables identified in Table 6 above. In reverse auctions, the winning bidders are not necessarily forced to go to their absolute lowest price – they just need to offer a price lower than their closest price competitor.

- **Fees.** When the cost of the auction (which likely ranges between 0.5-5.0%), is added to the final auction price. In order for the auction to deliver value, it must yield pricing results that offset these fees. No reverse auction firm contacted in our research was able to provide documentation that such savings have been consistently achieved.
- **Size Limits.** A reverse auction requires bidders to commit trading desk personnel to the auction and submit multiple bids. Many bidders will not commit such personnel to a contract opportunity.

FEE\$ are not transparent !!

Less competition

Savings are not proven

Reverse Auction



1. **NO** Savings
2. **NO** Fee Transparency
3. **LESS** Competition

Problems are Compounded by:

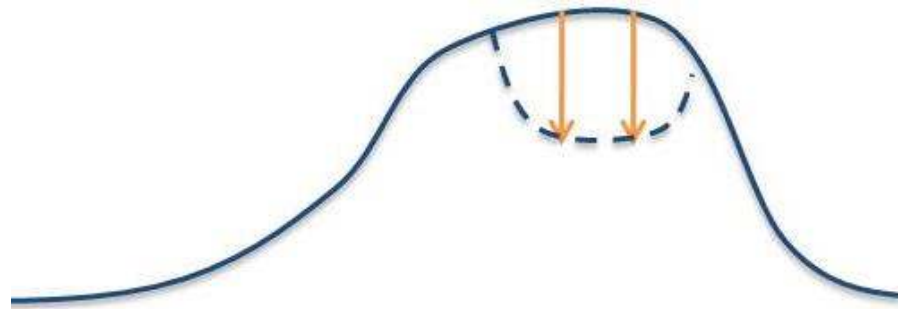
- Bundled rates
- Broker involvement
- Contract Risk
- Contract Execution timing

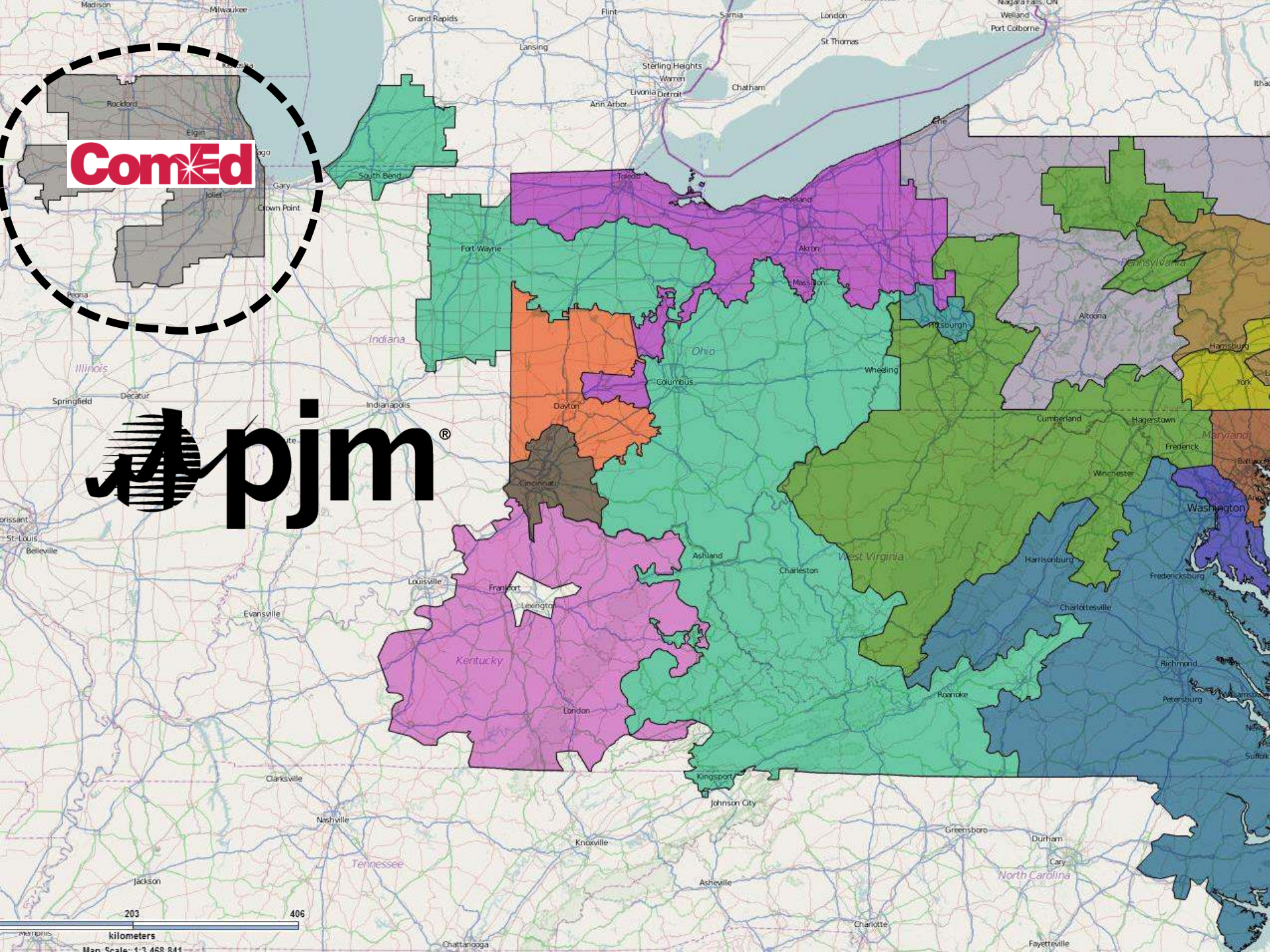


ANY
QUESTIONS
?

1. Demand Response :

Three(3) Ways To Lower Vendor Fees





ComEd

pjm®

203 406

kilometers

Map Scale: 1:3,468,844

Capacity Program Incentive

Load Drop (kW)

1,000

Gross Revenue

2020-21

2021-22

2022-23

3-Year Total

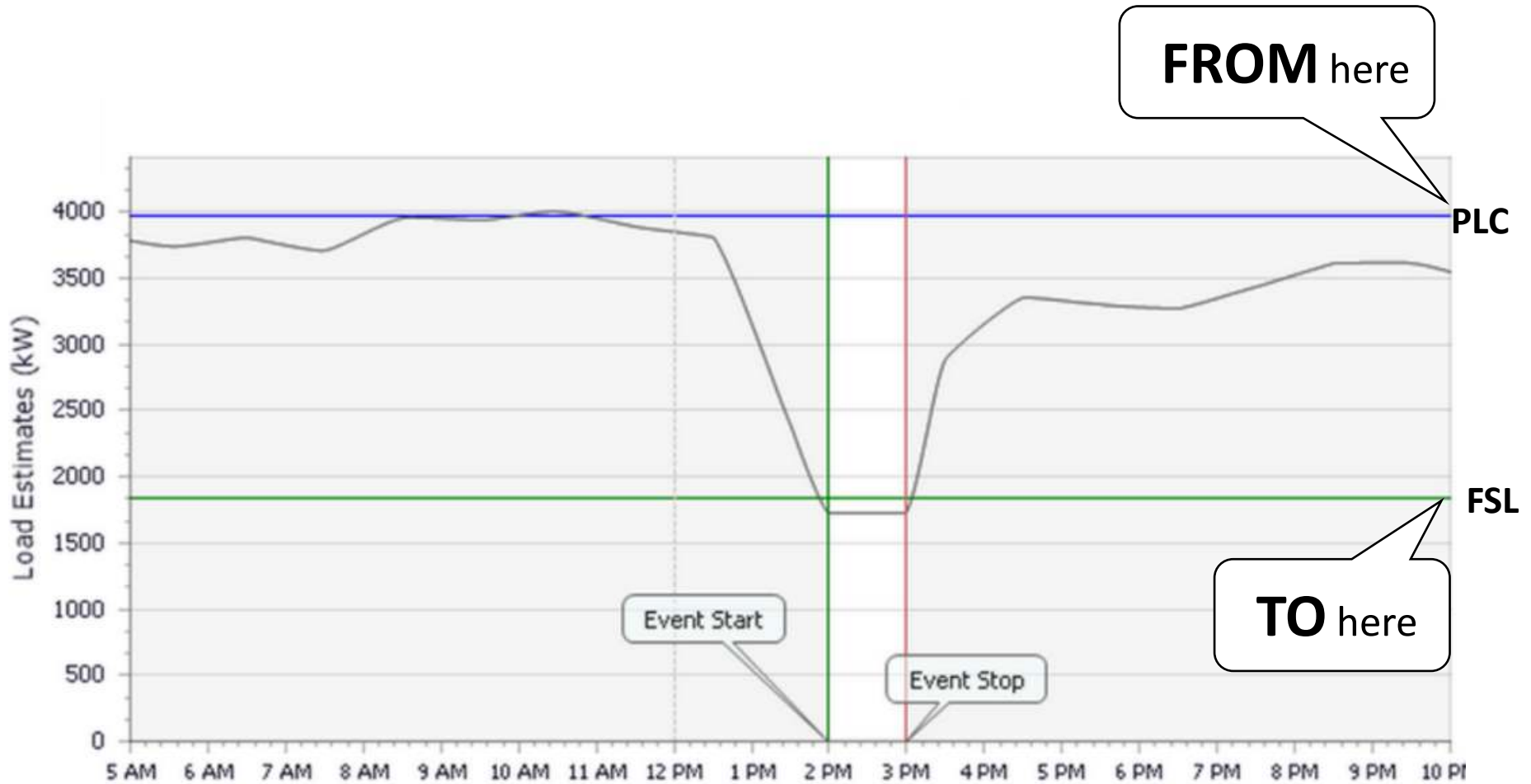
\$68,851

\$71,375

\$71,375

\$211,601

Perform Load Shed



Check Performance Calculation

$$\text{PLC} - (\text{Loss} * \text{FSL})$$



RIGHT WAY

...per PJM Tariff

$$(\text{PLC} / \text{Loss}) - \text{FSL}$$



WRONG WAY

Differs by **-8.5%**



PLC- (Loss*FSL)



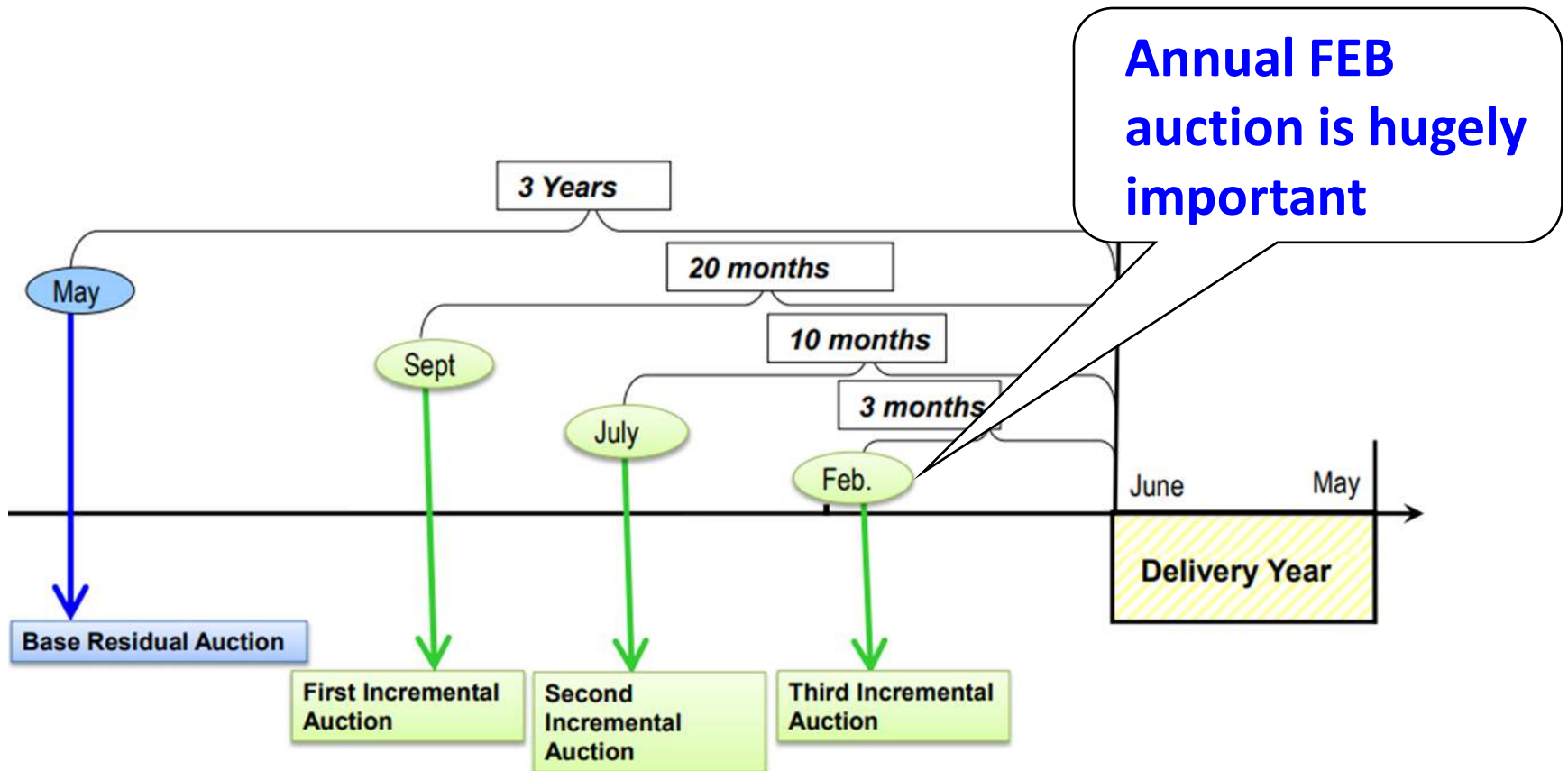
(PLC/Loss) - FSL



Really

66.5 %

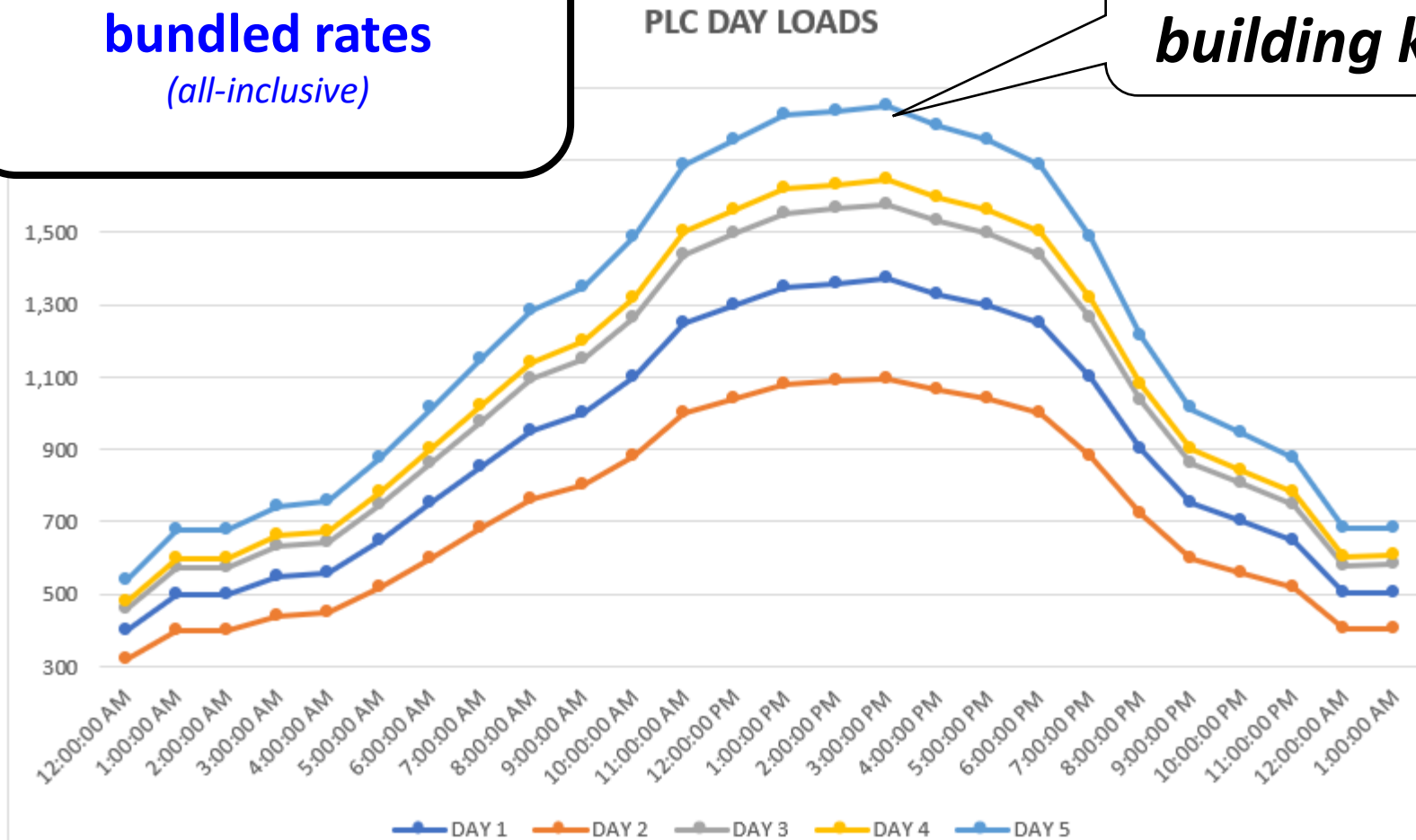
Sign Up in Sept-Dec *(not last minute)*



Manage down your PLC *(most value) !!*

**Ineffective for “fixed”
bundled rates**
(all-inclusive)

***Try to reduce
building kw***



Manage down your PLC *(most value) !!*

The screenshot shows the ComEd website interface. The top navigation bar includes the ComEd logo (An Exelon Company) and the slogan "powering lives". The main menu has "My Account" and "Outages" tabs. A sidebar on the left lists various services: "My Bill & Usage", "My Service", "Start Stop Move", "My Appointments", "Construction & Remodeling", and "Customer Choice". The main content area is titled "View Account Usage Data" and includes a "Select Account Number" dropdown menu. A dashed box highlights the "Capacity PLC" section of this menu, which lists two entries: "2941.046700" and "2626.705400". To the right, a table shows "Start Date" and "More" options for these entries.

Capacity PLC	Start Date	More
2941.046700	06/01/2019	+
2626.705400	06/01/2020	+

kW Decrease
= - 315 kW

kW

Cost Reduction
= \$26,941 /yr

Just Be Aware of Third Party Referrals

- **Technology partners, energy brokers, etc.**
- **Verify their independence (*using tool*)**
- **Avoid paying commission**
- **Kickbacks exist behind the scenes**

Call any CSP directly for a check bid



<https://www.pjm.com/markets-and-operations/demand-response/csps.aspx>

DPC Energy Resources, Inc.	Pat Seelye (917) 259-7882	OH
Duke Energy Ohio, Inc.	Lisa Stricko (513) 287-1815	OH, KY
Durham Light Company	John Peoples (412) 493-6385	DC, DE, IL, IN, MD, NC, NJ, OH, PA, VA, WV
Dynamic Energy Services Company, LLC	Redd Mace (614) 308-3872	OH
EDF Trading North America, LLC	Chris Armstrong (281) 761-0346	MD, OH, PA, IL
Electric America	John Kitzman (888) 817-8572	NJ
EMC Development Company, Inc.	Tim Savelle (410) 551-2480	PA, NJ, DE, OH, VA, WV, DC
EPB&A Power Networks Inc.	Andy Calvert (604) 908-8923	DC, DE, IL, IN, MD, NC, NJ, OH, PA, VA, WV
Enel A North America, Inc.	Doug Matheson (517) 892-2508 Steve Donnan (517) 892-2443	DC, DE, IL, MD, NC, NJ, OH, PA, VA, WV
Energy Logic, Inc.	Carolyn Banks (508) 398-0513	DC, DE, IL, IN, MD, NC, NJ, OH, PA, VA, WV
Energy Spectrum Inc.	Larry Pasch (718) 677-9077	DC, DE, IL, IN, MD, NC, NJ, OH, PA, VA, WV
Energy Technology Savings, LLC	Erin Haskins (908) 517-3352	NJ, PA
Enovos Global Technologies, Inc.	Bruce Campbell (602) 380-4371	DC, DE, IL, IN, MD, NC, NJ, OH, PA, VA, WV
EPGE Resources, LLC	Bharvi Patel (713) 638-1771	IL, OH, MD, NJ, PA, DC, DE, NY, CT, MA, RI, NH, ME, TX
East Power	Juditha Imani (247) 338-4790	DC, DE, IL, IN, MD, NC, NJ, OH, PA, VA, WV
Embright, LLC	Jeffrey Elds (319) 303-0584	DE, MD, OH, NJ, PA
Enclave Alternative Energy, Inc.	David Forayth (905) 665-3731	NJ
Glacial Energy of New Jersey, Inc.	Michael Gray (340) 715-7653	NJ, PA, MD, IL, DC, DE
Green Light Energy, LLC	Eric Wagner (610) 898-7818 Jack Patrick (484) 818-1923	DC, DE, IL, IN, MD, NC, NJ, OH, PA, VA, WV
Intarc.com, Inc.	Michael Webber (302) 477-1792	DC, DE, IL, IN, MD, NC, NJ, OH, PA, VA, WV
Illinois Municipal Electric Agency	Alice Schwan (217) 789-4632	IL
Independent Energy Consultants, Inc.	Mark Barro (828) 863-6060	DC, DE, IL, IN, MD, NC, NJ, OH, PA, VA, WV
Industrial Energy Users - Ohio	Amy Turk (419) 365-2840	OH, PA, VA, WV, IL, NJ, DE



ANY
QUESTIONS
?



INDEPENDENT

(1 of 3 in Illinois)



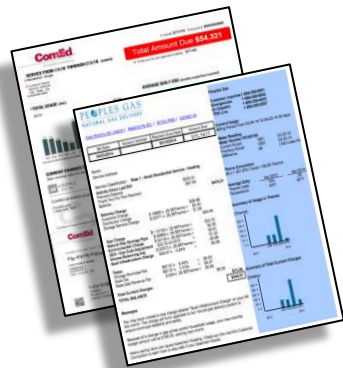
GAS
Procurement

ELEC
Procurement

Demand
Response

Curious to have an independent contract review ?

BILLS / CONTRACTS



1. identify & explain problems
2. quantify impact (\$)
3. recommend solution



Eoin Burke

Independent Consultant
E-Quantum Consulting, LLC.

m: 773-263-2426 **o:** 773-340-4004

e: eburke@e-quantum.org

w: www.e-quantum.org

"Honesty is the best policy" ~ Ben Franklin