

COUNTERFLOW

By Steve Huntoon

GreenHat: (Some of) the Rest of the Story



If you're as old as me you may remember the movie "Body Heat" from 1981. That last scene with Kathleen Turner on an exotic island beach somewhere.¹ Yeah, you know what I'm talking about.²

That brings us to the GreenHat Energy debacle, with the stakeholder tab running around \$185 million.³

Folks seem to think the GreenHat principals lost everything as their PJM financial transmission rights portfolio deteriorated in value. Bloomberg's headline: "Ex-JPMorgan Traders Lost Millions on Bad Bets in Power Market."⁴

I don't think so. I suspect the GreenHat principals, Andrew Kittell, John Bartholomew and Kevin Ziegenhorn, are sipping blender drinks on island beaches just like Kathleen Turner.⁵



Kathleen Turner in the movie "Body Heat"

The Stage

But first let's set the stage. Two of the GreenHat principals, Kittell and Bartholomew,⁶ are fresh off the JPMorgan market manipulation in California from 2010 to 2012 for which JPMorgan "agrees to pay a civil penalty of \$285,000,000 [and] agrees to disgorge alleged unjust profits of \$125,000,000."⁷ Kittell and Bartholomew themselves paid nothing.

As recounted in a detailed *RTO Insider* story, they set up shop in 2014 as GreenHat Energy.⁸

"Green hat" in Chinese basically means someone is getting screwed. So at least they had a sense of humor.

Over several years, they accumulate the largest FTR portfolio in PJM history — 890 million MWh — backed by only \$600,000 in collateral.

It isn't clear that PJM connected the dots of Kittell and Bartholomew to the JPMorgan market manipulation, though the connection was hiding in plain sight in FERC's eLibrary via a word search on "Andrew Kittell" or "John Bartholomew."

How the Scheme Works

The scheme here relied on the minimal collateral requirement to hold hundreds of millions of dollars in FTR positions. All that has to happen for GreenHat to make money is for positions to change in value over time — as of course they will — and for GreenHat to

sell "in the money" positions to third parties. GreenHat would prefer that the overall value of its portfolio increase over time, but that isn't necessary for GreenHat to make money because GreenHat can sell positions with value, and default on the rest. Indeed, GreenHat would want to buy every possible FTR with zero incremental collateral requirement, regardless of whether it expected those FTRs to make money.

Let me give you an example that is so simple even I can understand it. Let's say PurpleHat Energy joins PJM and puts up \$600,000 credit. PurpleHat buys long-term FTRs with no additional credit requirement: let's say FTR 1 from source A to sink B for \$10, and say FTR 2 from source C to sink D for \$6.

As time goes on, FTR 1 decreases in value from \$10 to \$7, and FTR 2 increases in value from \$6 to \$8. PurpleHat bundles up FTR 2 and thousands of other FTRs that have *increased* in value (i.e., "in the money") and goes looking for a buyer of these "winners." Now the buyer looks at FTR 2, for example, and is thinking that if the current \$8 value is maintained to settlement, PJM will pay me \$8. Of course the buyer has to discount that \$8 for the time value of money, risk of value change (could be up, down), etc. So the buyer agrees to pay PurpleHat, say, \$7. Notice that PurpleHat has made \$1 on FTR 2 (\$7 revenue minus \$6 cost). Multiply that by thousands of other FTRs and their megawatt-hour quantities and you get to real money real fast.

Now remember PurpleHat is selling winners for cash to third parties and will default on the losers. So PurpleHat can make wads of money even if its *overall* portfolio of winners and losers goes down in value. Got it?

The Collateral That Wasn't

Beyond this big picture, here's a remarkable part of the story: As the GreenHat portfolio deteriorated in value, and some FTR participants raised red flags with PJM,⁹ PJM asked GreenHat for more collateral.

GreenHat purported to provide that, in June 2017, in the form of pledging \$62 million in future revenue from FTR sales agreements that GreenHat had with a third party, which we now know is Shell Energy North America¹⁰ ("Pledge Agreement"). Here is how PJM described it: "Mr. Kittell worked with PJM to establish a dedicated depository account and represented that GreenHat would request the third party to deposit the revenues from the bilateral contracts into a bank account that PJM had access to and from which PJM would execute automated clearing house withdrawals to cover net losses that accumulated in GreenHat's PJM account."¹¹

Now, one might think, wouldn't PJM verify with Shell that *Shell hadn't already given GreenHat some or all of that \$62 million* (assuming that \$62 million is a real number)? Well, PJM did ask GreenHat for permission to check with Shell about that \$62 million, and GreenHat said ... *no*.¹²

COUNTERFLOW

By Steve Huntoon

Now, one might think, that's that: PJM would tell GreenHat to come up with something better than a Nigerian prince story for \$62 million. Instead, PJM went ahead with the Pledge Agreement,¹³ saying it had no choice,¹⁴ and GreenHat went on to more than double the size of its FTR position.¹⁵

And, as fate would have it, GreenHat *had* already pocketed whatever was owed by Shell (not \$62 million, but perhaps \$7 million — more on that next).¹⁶ Uh oh.

The \$62 Million That Wasn't

There's one more part of the story to tell here. You've probably assumed, like I did, that there had to be something to the \$62 million claim that GreenHat made to PJM. But maybe that ain't so. Maybe there never was any \$62 million — not at the time of the FTR sale to Shell, or ever.

Analysis of the GreenHat positions suggests they were purchased at a cost of approximately \$19 million when GreenHat acquired them (with minimal collateral) and valued in the range of \$25 million when GreenHat sold them to Shell. It seems what GreenHat entered into the PJM eFTR system was just made up.¹⁷

Per Queen in "Bohemian Rhapsody": "Is this just fantasy?" And here the answer seems "yes."

What Now?

What's to be done now? FERC Enforcement should be all over this if it isn't already. The penalties for market manipulation can be substantial as the JPMorgan order shows.¹⁸ And PJM should vigorously pursue civil action, such as the one initiated in Texas.

Lesson for the Future

Lesson for the future: All RTOs should carefully review all their credit requirements for everything — with experts in credit — just in case Kittell and Bartholomew, or others like them, are coming their way.

P.S.: The GreenHat experience is not an indictment of energy markets in general, or FTRs in particular. It is a cautionary tale of faulty credit policy and oversight. ■

[power-grid-and-its-customers-could-get-stuck-paying-for-a-failed-wall-street-bet](#).

⁵ At least Andrew Kittell seems to be. On Feb. 1, 2017, Kittell purchased a \$3.4 million home on Coronado Island, Calif. <https://blockshopper.com/ca/sandiego/coronado/property/5364111600/640-coronado-avenue>; https://www.zillow.com/homes/for_sale/17071030_zpid/32.697143,-117.187762,32.694768,-117.191425_rect/17_zm/1_fr/?view=public.

TripAdvisor tells us: "Developed in 1888 as a beach resort town, and home to the famous Hotel del Coronado, the island is blessed with one of the finest beaches in the world and bathed in endless sunshine." Must be nice.

⁶ A touch of irony: Bartholomew's career includes a stint at FERC's Office of Enforcement investigating Energy Transfer Partners and Amaranth market manipulation. <http://www.gpo.gov/fdsys/pkg/CHRG-113shrg91522/pdf/CHRG-113shrg91522.pdf> (pdf pages 1617-1618).

⁷ <https://elibrary-backup.ferc.gov/idmws/common/opennat.asp?fileID=13317770>.

⁸ <https://www.rtoinsider.com/pjm-greenhat-energy-market-manipulation-jp-morgan-ftr-100407/>. According to corporate documents on file with the Texas secretary of state, Bartholomew formed GreenHat on June 25, 2014. Ziegenhorn was added as a manager on Aug. 7, 2014, and Kittell was added as a manager on Feb. 26, 2015.

⁹ As early as April 2016, at least one FTR market participant was warning PJM about a 100 million MWh FTR position with minimal collateral, what DC Energy called the "Illustrative Portfolio" (yes, GreenHat's). <https://elibrary-backup.ferc.gov/idmws/common/OpenNat.asp?fileID=14937343>.

¹⁰ "PJM Interconnection, L.L.C. ... Verified Rule 202 Petition," District Court of Harris County, Texas, Cause No. 201869829-7, filed Oct. 1, 2018.

¹¹ <https://elibrary-backup.ferc.gov/idmws/common/opennat.asp?fileID=14970001> (pdf page 13).

¹² "PJM asked Mr. Kittell for permission to contact the counterparty to the bilateral trades regarding the contractual arrangement with GreenHat, and Mr. Kittell denied PJM's request and specifically asked PJM not to contact the counterparty." <https://elibrary-backup.ferc.gov/idmws/common/opennat.asp?fileID=14995137> (page 4).

¹³ The email trail we have in the FERC filings has PJM asking for more support from GreenHat and ultimately sending an email on April 19, 2017, requesting a log of every payment GreenHat had received from Shell. But from there the paper trail goes cold: PJM doesn't provide any response from GreenHat. <https://elibrary-backup.ferc.gov/idmws/common/opennat.asp?fileID=14995137> (Appendix B, second page).

Nor does it appear PJM questioned why Shell would pay GreenHat \$62 million for positions actually worth a fraction of that amount (as discussed later).

¹⁴ "To avoid a claim of interference with GreenHat's contractual counterparty and to allow GreenHat the ability to sell down its portfolio, PJM had no choice but to comply with this request [that PJM not contact Shell]." <https://elibrary-backup.ferc.gov/idmws/common/opennat.asp?fileID=14995137> (page 4).

This is puzzling. PJM had at least colorable Tariff authority to require meaningful collateral or other protection (if not as a condition to maintain existing positions, surely as a condition to expand those positions): "PJMSettlement may select participants for review on a random basis and/or based on identified risk factors such as, but not limited to, the PJM markets in which the participant is transacting, the magnitude of the participant's transactions in the PJM markets or the volume of the participant's open positions in the PJM markets. Those participants notified by PJM Settlement that they have been selected for review shall,

upon 14 calendar days' notice, provide a copy of their current governing risk control policies, procedures and controls applicable to their PJM market activities and shall also provide such further information or documentation pertaining to the participants' activities in the PJM markets as PJMSettlement may reasonably request. ... Each selected participant's continued eligibility to participate in the PJM markets is conditioned upon PJMSettlement notifying the participant of successful completion of PJMSettlement's verification of the participant's risk management policies, practices and procedures, as discussed herein." PJM Tariff Attachment Q, Section I.B (emphasis added).

PJM seemed to rely on Attachment Q, Section II.D.2 (PJM has the right to "require additional collateral as may be deemed reasonably necessary to support current market activity"), but this section appears applicable only to an "unsecured credit allowance," which is not what GreenHat apparently had.

¹⁵ GreenHat had a portfolio position of about 375 million MWh in mid-June 2017. The Pledge Agreement was entered into late June 2017. GreenHat went on to increase its position to 890 million MWh. <https://elibrary-backup.ferc.gov/idmws/common/OpenNat.asp?fileID=14937343> (Figure 1, page 9).

It is not clear how this more than doubling of the GreenHat position comports with PJM's statement, quoted in the preceding footnote, that PJM was motivated to go forward with the Pledge Agreement to "allow GreenHat the ability to sell down its portfolio" (emphasis added).

¹⁶ "PJM specifically asked Mr. Kittell if the counterparty had paid GreenHat any of the money due to GreenHat under their bilateral trade agreements. GreenHat never informed PJM that the counterparty had paid any money on that contract. Instead, Mr. Kittell forwarded PJM documents indicating money that it claimed the counterparty owed to GreenHat under their contract that would flow to PJM under the Pledge Agreement. It wasn't until June 2018 that PJM learned from Mr. Kittell that GreenHat sent two invoices with a "Final Purchase Price" due from the counterparty to GreenHat under two separate FTR bilateral agreements between the two parties — well before GreenHat commenced discussions with PJM regarding the Pledge Agreement, and that the counterparty paid GreenHat all of the money the counterparty believes was due to GreenHat under those bilateral agreements." <https://elibrary-backup.ferc.gov/idmws/common/opennat.asp?fileID=14995137> (pages 4-5, emphasis added).

¹⁷ How is such a thing possible? GreenHat could have used the PJM eFTR system so as to make it appear as if Shell owed GreenHat an amount that far exceeded the actual value of the positions. There is a field in the eFTR system, which PJM does not use in settlement, that purports to offer market participants the ability to enter bilateral contract transaction prices. The GreenHat/Shell transacted FTRs had entered prices in this field that did in fact add up to at least \$62 million, which GreenHat apparently offered to PJM as proof that it had receivables to pledge to PJM. But use of this field is not customary for bilateral transactions in the eFTR system (most market participants leave this field blank or enter 0). In other words, GreenHat could have entered 62 cents or \$620 trillion with no economic significance (which may explain why Shell would not have cared what GreenHat entered). The actual transaction prices between GreenHat and Shell would be governed by the contracts entered into by the parties, not by what was entered into eFTR. The GreenHat invoices in 2016-2017 for "Final Purchase Prices" of \$5.2 million and \$1.5 million appear to reflect the economic substance of the FTR sales.

¹⁸ PJM is trying to keep \$550,000 in collateral of a GreenHat affiliate in PJM Interconnection, L.L.C., Docket No. ER18-1972-000, \$550,000 is peanuts. PJM's efforts should be on civil action and on FERC Enforcement.

¹ It was filmed on Tunnels Beach, Hawaii.

² And if you're a youngster, might I recommend that movie? Warning: You'll never look at your significant other the same.

³ <https://pjm.com/-/media/committees-groups/committees/mrc/20180918-special-ftr/20180913-default-reference-points.ashx> (slide 6).

⁴ <https://www.bloomberg.com/news/articles/2018-09-25/a>