MARKET SURVEILLANCE COMMITTEE

Congestion Revenue Rights: Background and Principles

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Topics

- Hedging value of CRRs
- Revenue inadequacy and Hedging Values
- The Allocation process and WBWS

Congestion Risk and Hedging Instruments

- There are several layers of congestion (basis) volatility and/or risk associated with electricity contracts
 - Hourly volatility in congestion costs
 - Month to Month volatility in average congestion costs
 - Long-run "trends" in monthly or seasonal congestion costs

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 - Long-run "trends" in monthly or seasonal congestion costs
- Canonical examples of CRR applications were applied to investments in generation (different issues for large loads)
 - Steve Stoft's "Bankability"
 - Only LT CRRs fully deal with this
 - Yet this process has devoted almost no attention to them
 - How much value is there in the ability to nominate or purchase a sequence of seasonal or monthly CRRs for financing new investment?

How Risky is Congestion Cost?

- Ongoing work is trying to compare the volatility of CRRs to other financial instruments
- Working with 7800 CRR (node pairs) for which more than 50 MW-months were allocated or purchased from 2022-2024
- Constructing 7 years of hourly values for each of these "popular" CRRs
- Comparison to conventional financial instruments is complicated by idiosyncratic nature of a CRR bought seasonally or monthly

Monthly Congestion Costs on "most popular" CRRs

Source	Sink	Mean	5th %	95th %
MOHAVE_5_B2	MCCULLGH_5_N101	-0.43	-1.64	0.15
MCCULLGH_5_N101	MOHAVE_5_B2	0.43	-0.15	1.64
	DOUNDNAT E DA	0.00	0.05	1.24
MALIN_5_N101	ROONDMI_5_B1	0.23	-0.95	1.24
TH NP15 GEN-APND	DLAP PGAF-APND	0.61	-0 78	4 36
		0101	0170	
POD_DIABLO_7_UNIT 2-APND	DLAP_PGAE-APND	4.32	-0.10	13.22
POD_DIABLO_7_UNIT 1-APND	DLAP_PGAE-APND	4.32	-0.10	13.22
SYLMARDC_2_N501	DLAP_SCE-APND	2.40	-14.94	18.16
TH SP15 GENLADND		2 02	-0.15	8 10
		2.30	-0.15	0.45
PALOVRDE_ASR-APND	DLAP_SCE-APND	2.86	-1.48	10.10
-				
TRACY_5_B1	CAPTJACK_5_N512	-0.57	-5.90	3.84

Values for 2018 – 2024: Mean MCE = 51.00 Preliminary and subject to revisions if errors are found

Trends in "popular" CRRs



Trends in "popular" CRRs



Trends in "popular" CRRs



Revenue Adequacy and Hedging Value

- In a 2018 MSC presentation I said (of phase 1B)
 - Targeted reductions may significantly devalue CRRs as hedging instruments
 - Specific CRRs could face very large payment uncertainty...
 - These concerns appear to have materialized
- Measures of auction insufficiency suffer from the fact that the purchase price of current CRRs must be influenced by this payment uncertainty (risk).
- Revenue sufficiency should not require degrading hedging value to this extreme
 - Čontinue to identify why revenue shortfalls are so large in CAISO
 - If necessary, sell lower quantities of high quality CRRs rather than larger quantities of low quality CRRs
 - Allocate residual revenue shortfalls truly "pro-rata", across all CRRs

Allocation

- If options along the lines of "willing seller" are pursued, the allocation process becomes the main mechanism for "injecting" CRRs into the market. This raises several related questions.
 - 1. Is the current allocation process efficient and/or equitable?
 - Current allocation process uses a MW based approach to nominations, rather than a "value" metric.
 - There could be an incentive to over nominate on valuable pairs in order to capture a larger share of pro-rata reductions.
 - How do LT rights play into allocation outcomes?
 - 2. How does the allocation process impact "willingness" to sell?
 - Do entities seek out the highest expected value CRRs or those that best hedge their market exposure?
 - How do they balance these considerations?
 - The issue of counterflow (expected negative value) CRRs; not an appealing allocation
 - 3. How does regulatory oversight/guidance impact the initial requests for CRRs in the allocation process, and the willingness to sell them in an auction?

Summary: Two Ends of the Spectrum on WBWS

- "Financial markets could just replace current CRRs"
 - Purely financial players could very well demand expected returns as large or larger than those experienced in the current CRR sales
 - The cost and availability of bilaterally negotiated CRRs could be very high.
 - I would not expect financial markets to fully replace conventional CRRs if the latter were eliminated.
 - Further analysis of usefulness of bilateral hubs is needed
- "WBWS will remove all CRRs from the market"
 - WBWS does not *eliminate* conventional CRRs but rather injects them into the market through LSEs, raising (at least) two sets of issues
 - How many "fewer" overall CRRs would be available?
 - Limited to sources/sinks awarded in the allocation process
 - Would market power or other regulatory/political frictions substantially impede the secondary trading of CRRs