BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Continue Implementation and Administration of California Renewables Portfolio Standard Program.	)	Rulemaking 11-05-005 (Filed May 5, 2011)

SAN DIEGO GAS & ELECTRIC COMPANY (U 902 E) COMMENTS ON PRELIMINARY STAFF PROPOSAL REGARDING CONFIDENTIALITY RULES

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I.
INTRODUCTION AND OVERVIEW

In accordance with the Rules of Practice and Procedure of the California Public Utilities Commission (the "Commission"), the *Administrative Law Judge's Ruling Requesting Comments on Preliminary Staff Proposal to Clarify and Improve Confidentiality Rules for the Renewables Portfolio Standard Program* (the "Ruling") issued in the above-captioned docket on July 1, 2013, and the July 16, 2013 ruling of Administrative Law Judge ("ALJ") Anne Simon extending the comment filing deadline, San Diego Gas & Electric Company ("SDG&E") hereby submits these comments regarding the preliminary staff proposal (the "Proposal") to effectively dismantle the confidentiality rules adopted in Rulemaking ("R.") 05-06-040.

In R.05-06-040, the Commission sought to implement Senate Bill ("SB") 1488, which instructed the Commission to examine its practices regarding confidential treatment in order to balance the need for meaningful public participation and transparency in rulemaking proceedings against the need for protection of non-public market sensitive and trade secret information.[1/] The California Legislature has long recognized the need to protect certain categories of information in order to prevent market manipulation and resulting harm to

[1/] D.06-06-066, as amended by D.07-05-032, *mimeo*, p. 2.

ratepayers. Public Utilities Code §§ 454.5(g) and 583, and the Public Records Act, Govt. Code § 6254(k), have historically served as the basis for protection of these categories of information, and adoption of SB 1488 did not alter applicability of these provisions. Rather, the statute directs the Commission to ensure decision-making that is open and transparent to an extent that promotes meaningful participation by the public without treading upon established principles of confidential treatment.[2/]

In Decision ("D.") 06-06-066, issued in R.05-06-040, the Commission sought to "balance the policy goals of public disclosure, full participation and transparency with the statutory provisions allowing and indeed *requiring* confidential treatment of data in limited instances."[3/] It noted the existence of a presumption that information should be publicly disclosed and that the party seeking confidential protection bears the burden of proof, but pointed out that under the Public Utilities Code and the Public Records Act, certain information *must* be protected, and that confidential treatment of such information is "required in order to carry out our statutory and constitutional duties."[4/] The Commission also recognized the ratepayer protection considerations involved, declaring that "[c]onfidentiality protections are essential to avoid a repetition of electricity market manipulation."[5/] This view was echoed by the Division of Ratepayer Advocates ("DRA"), which observed that the Commission must protect California consumers from "unnecessary exposure to market risks."[6/]

[2/] *See* SB 1488, Sec. 1 (Stats. 2002, Ch. 690).
[3/] D.06-06-066, as amended by D.07-05-032, *mimeo*, p. 2 (emphasis added).
[4/] *Id*. at pp. 2-3.
[5/] *Id*. at p. 4.
[6/] *Id.* at p. 10.

The Commission recognized the commercial nature of market participants' interest in investor-owned utility ("IOU") procurement data, noting in the decision that "non-IOUs in the business of selling electricity very much want access to IOU records."[7/] It acknowledged the advantage to generators of having this information, but reiterated the importance of guarding against disclosure of information that could lead to market manipulation, pointing out that "Californians are still paying for the energy crisis that commenced in 2000."[8/] Focusing on the commercial interests of market participants versus those of non-market participants, the Commission determined that "[w]e should distinguish between market participants and non-market participants such as consumer groups in setting confidentiality rules."[9/] It established a process for *non*-market participants to obtain access to confidential information, but concluded that access to confidential procurement information by market participants would not serve the public interest, finding that "[r]atepayer protection requires us not only to allow meaningful input into our decision making, but also to protect consumers from market manipulation and other harm that can arise if market sensitive information is released across the board."[10/]

In order to "ensure the best balancing between the broadest disclosure and the narrowest confidentiality," the Commission adopted in D.06-06-066, *et seq*., detailed rules governing confidentiality of certain categories of electric procurement data of IOUs and energy service providers ("ESPs").[11/] The Commission established two matrices – one applicable to IOUs, the other to ESPs – setting forth categories and sub-categories of data and providing a confidentiality designation for each.[12/] To the extent information matches a Matrix category, it

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7/ *Id.* at p. 11.
8/ D.06-06-066, as amended by D.07-05-032, *mimeo*, p. 16.
9/ *Id.* at p. 4; *see also* D.07-05-032, *mimeo*, pp. 2-3.
10/ D.06-06-066, as amended by D.07-05-032, *mimeo*, p. 19.
11/ *Id*. at p. 3.
12/ *See* D.06-06-066, as amended by D.07-05-032, *mimeo*, Appendices 1 and 2.

is entitled to the protection the Matrix provides for that category of information. The Commission has made clear that information must be protected where "it matches a Matrix category exactly . . . or consists of information from which that information may be easily derived."[13/]

The Proposal would largely eliminate the protections adopted in D.06-06-066 related to Renewables Portfolio Standard ("RPS") procurement data. As discussed in more detail below, the modifications suggested in the Proposal are ill-conceived and unlawful. The Proposal posits that greater disclosure of RPS procurement data to market participants will provide benefits in the form of increased public participation in the RPS program, as well as improved reporting to the Legislature and better coordination between the Commission and other organizations involved in procurement planning.[14/] As discussed below, however, these assumptions are faulty – public disclosure of confidential RPS data to market participants is not required in order to achieve the objectives outlined in the Proposal. The Proposal disregards entirely the serious ratepayer harm that would result from requiring near-term disclosure of contract pricing, net open and project evaluation/status data. Disclosure of this information to market participants would invite market manipulation and is likely to discourage investment in renewables projects in California, which could significantly increase the RPS compliance costs borne by utility ratepayers.

[13/] *See Administrative Law Judge's Ruling on San Diego Gas & Electric Company's April 3, 2007 Motion to File Data Under Seal*, issued May 4, 2007 in R.06-05-027, p. 2.

[14/] *See, e.g.*, Ruling, pp. 15, 16, 17, 22, 24, 25, 28, 29, 30, 32, 33, 34, 35, 36, 38, 39.

The Commission correctly concluded in D.06-06-066 that the data at issue here constitute market sensitive, trade secret information protected under Public Utilities Code §§ 583 and 454.5(g) and the Public Records Act, Govt. Code § 6254(k).[15/] In addition, to the extent disclosure of confidential procurement information would place the utility at an unfair business disadvantage, such information must be protected under Commission General Order ("G.O.") 66-C. Thus, the Commission is obligated to protect contract pricing, net open and project evaluation/status information for a period of time long enough to prevent harm. Based upon an extensive evidentiary record developed in R.05-06-040, the Commission has established a three-year window of confidential treatment for this information.[16/] The record of the instant proceeding is clearly insufficient to permit the Commission to disturb the rules adopted in D.06-06-066. Accordingly, SDG&E urges the Commission to reject the Proposal in its entirety. To the extent SDG&E expresses support for certain aspects of the Proposal (*e.g.*, equalizing disclosure obligations of IOUs and ESPs), it recommends that the Commission address such issues separately, outside the context of the Proposal.

Given the limited time available to consider the Proposal (approximately five weeks, compared with the 13 months taken to develop the rules adopted in D.06-06-066), SDG&E provides its initial comments and raises the issues it deems to be most problematic. Silence regarding a particular element of the Proposal should not be interpreted as agreement with or support for that element. SDG&E reserves the right to comment in the future on any and all aspect of the Proposal.

15/ *See* D.06-06-066, as amended by D.07-05-032, *mimeo*, p. 5 (referencing the "competing statutory directives" related to confidentiality of procurement data and the Commission's obligation to reconcile them). All statutory references herein are to the Public Utilities Code unless otherwise noted.

16/ *Id.* at p. 64; *Administrative Law Judge's Ruling Granting San Diego Gas & Electric Company's May 21, 2007 Amendment to April 3, 2007 Motion and May 22, 2007 Amendment to August 1, 2006 Motion*, issued June 28, 2007 in R.06-05-027, p. 3.

II.
LEGAL REQUIREMENTS

Market sensitive electric procurement information is protected under §§ 583 and 454.5(g). It is also protected under the Public Records Act, Govt. Code § 6254(k). Finally, to the extent disclosure of confidential procurement information would place the utility at an unfair business disadvantage, such information must be protected under Commission G.O. 66-C. Section 583 establishes the process for seeking confidential treatment. Section 454.5(g), Govt. Code § 6254(k) and G.O. 66-C provide the substantive legal basis for asserting the right to confidential treatment of procurement data.

A. Section 583

The Commission explained in D.06-06-066 that § 583 establishes a right to confidential treatment of information otherwise protected by law.[17/] It is a procedural provision that "sets forth a process for dealing with claims of confidentiality . . ."[18/] When a confidentiality claim is made, the information that a party seeks to protect is kept under seal until "the Commission finally determines, based on law other than § 583 itself, that a claim of confidentiality lacks merit (and any appeals are exhausted) . . ."[19/] Section 583 "allows a party to submit information about which it has a concern under seal in the first instance, so that its claims about confidentiality may be tested."[20/]

[17/] D.06-06-066, as amended by D.07-05-032, *mimeo*, at pp. 27-30. Section 583 states:

> No information furnished to the commission by a public utility, or any business which is a subsidiary or affiliate of a public utility, or a corporation which holds a controlling interest in a public utility, except those matters specifically required to be open to public inspection by this part, shall be open to public inspection or made public except on order of the commission, or by the commission or a commissioner in the course of a hearing or proceeding. Any present or former officer or employee of the commission who divulges any such information is guilty of a misdemeanor.

[18/] *Id.* at p. 27.
[19/] *Id.* at p. 30.
[20/] *Id.* at p. 29.

B. Section 454.5(g)

Section 454.5(g) requires the Commission to protect from disclosure market sensitive information related to a utility's procurement plan:

> The Commission shall adopt appropriate procedures to ensure the confidentiality of any market sensitive information submitted in an electrical corporation's proposed procurement plan or resulting from or related to its approved procurement plan, including, but not limited to, proposed or executed power purchase agreements, data request responses, or consultant reports, or any combination, provided that the Office of Ratepayer Advocates and other consumer groups that are non-market participants shall be provided access to this information under confidentiality procedures authorized by the Commission.

The Commission has declared that information is "market sensitive" for purposes of § 454.5(g) if it has "the potential, if released to market participants, to materially affect a buyer's market price for electricity."[21/] The provision requires that access to confidential procurement information be provided to Commission staff and to other non-market participant consumer groups under authorized confidentiality procedures.[22/]

C. Public Records Act

Under the Public Records Act, Govt. Code § 6254(k), records subject to the privileges existing in the Evidence Code are not required to be disclosed.[23/] Evidence Code § 1060 provides a privilege for trade secrets, which Civil Code § 3426.1 defines, in pertinent part, as information that derives independent economic value from not being generally known to the public or to other persons who could obtain value from its disclosure. Thus, if information that is not publically disclosed would permit one party to derive economic benefit at the expense of another party, it is properly treated as "trade secret" information and must be protected.

[21/] *Id.* at p. 44.
[22/] *See* D.06-06-066, as amended by D.07-05-032, *mimeo*, p. 46; D.07-05-032, *mimeo*, p. 2.
[23/] *See also* Govt. Code § 6254.7(d).

D. G.O. 66-C

G.O. 66-C operates to protect from disclosure non-public information submitted to the Commission that, if revealed, would place the regulated company at an unfair business disadvantage.

III.
DISCUSSION OF STAFF PROPOSAL

A. The Proposal Mischaracterizes the Issue Before the Commission

The Proposal suggests that increased disclosure of RPS procurement data is necessary in order to (i) facilitate public participation; (ii) enable the Commission's reporting to the Legislature; and (iii) allow interactions between the Commission and the California Independent System Operator ("CAISO") and/or the California Energy Commission ("CEC").[24/] These claims lack merit. The current rules and Commission practices adopted in accordance with D.06-06-066, along with existing confidentiality procedures at the CAISO and CEC, accomplish these objectives outlined in the Proposal.

As a practical matter, the only constituency that is currently unable to access confidential RPS procurement data under the existing rules is market participants – *i.e.,* sellers of electric generation. Thus, the issue before the Commission, properly framed, is whether *generators* and other market participants should have access to non-public RPS procurement data, and whether providing such access would ultimately benefit utility ratepayers.

In ruling on this question, the Commission must consider, as it did in D.06-06-066, California's experience with market manipulation during the energy crisis and whether disclosure of non-public procurement data to market participants will improve or undermine the IOUs' ability to negotiate effectively on behalf of utility ratepayers. It must remain mindful of

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[24/] Ruling, *supra*, note 14.

its observation in D.06-06-066 that "[t]here is no evidence that in enacting SB 1488 the Legislature was concerned with enhancing the competitive posture of generators."[25/] Ultimately, the Commission must determine whether it will now abandon on the basis of the sparse record developed in the instant proceeding its prior determination that its statutory obligation to protect market sensitive, trade secret procurement information – as well as its duty to shield ratepayers from unreasonable costs – bars near-term disclosure of non-public RPS procurement data to generators and other market participants.

B. The Proposal Fails to Consider the Significant Ratepayer Harm that Will Result from Disclosure of Confidential Procurement Data to Generators

As noted above, the Proposal is premised on the notion that requiring greater disclosure of procurement data to market participants will provide benefits in the form of increased public participation, as well as improved reporting to the Legislature and better coordination between the Commission and the CAISO/CEC. The Proposal provides little support for this proposition – and, indeed, the facts do not bear these claims out – but even more problematic, the Proposal disregards the serious ratepayer harm that would result from requiring near-term disclosure of confidential procurement information.

It is clear that disclosure of near-term pricing, utility net open and project evaluation/status information would be a boon to generators and other market participants. It is equally clear that such disclosure would cause significant harm to utility ratepayers. If near-term contract pricing information is disclosed to the market, it will create a price target that would impact the pricing offered by *all* market participants. Similarly, premature disclosure of utility net open positions would encourage generators to manipulate pricing in response to utility demand. This would cause harm to ratepayers regardless of the directional impact on

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[25/] D.06-06-066, as amended by D.07-05-032, *mimeo*, p. 18.

pricing. For example, if SDG&E experiences a high RPS net short, and this fact is disclosed to the market, the result would be a rise in renewable energy prices, which would produce a corresponding rise in RPS compliance costs for SDG&E's ratepayer customers. Conversely, if the market becomes aware that SDG&E has low demand for new projects, bidders in SDG&E's RPS solicitations may artificially reduce pricing in order to ensure selection and Commission approval of a contract, and then seek contract re-pricing at a subsequent point. This creates delay, burdens the administrative process and forces acceptance of higher pricing to avoid project failure – negative impacts ultimately borne by ratepayers in the form of higher RPS compliance costs.

Likewise, ratepayer harm would result from disclosure of information regarding the evaluation/status of RPS project. Project evaluation/status information is directly linked to IOUs' net open position since information establishing that RPS projects will not come online as expected could reveal an IOU net short position. Thus, disclosure of this information creates the same risk to ratepayers as disclosure of utility net open data. Disclosure of project evaluation/status information is also likely to discourage investment in renewables projects, which would reduce competition in the renewables market in California, to the detriment of utility ratepayers. The information provided to the Commission concerning viability of specific RPS projects identifies barriers to project success and other information that is extremely sensitive from a commercial perspective. Since public disclosure of this information could hamper developers' ability to negotiate necessary contracts and/or invite interference with project development by competitors, they are likely to view it as highly objectionable. Rather

than submit to these disclosure requirements, developers may elect to site their projects outside of California. Thus, requiring disclosure of the commercially sensitive details of developers' projects could chill further development of the renewables market in California, which would reduce competition and result in higher RPS compliance costs to be borne by utility ratepayers.

Given the likelihood that disclosure of near-term contract pricing, net open and project evaluation/status data would encourage market manipulation by generators and discourage development of the renewables market in California – and the significant and negative ratepayer impacts that would result – this information must be protected from disclosure for a period long enough to prevent the harm described above. In D.06-06-066, the Commission adopted general guidelines for protection of market sensitive and trade secret contract pricing, net open and project evaluation/status data. In concluded, for example, that "[r]esidual net open (short or long) information should be confidential for three years."[26/] Similarly, it determined that project evaluation/status information and individual contract terms, including pricing, for energy or capacity between unaffiliated counterparties should be confidential for three years from the date the contract states deliveries begin.[27/] The three-year period of protection reflects that view that three years is the shortest time within which new generation can come online, and the notion that a period of protection shorter than three years could allow market participants to engage in market manipulation since new generation would be unavailable to offset energy price impacts.[28/]

[26/] *Id.* at p. 64.

[27/] *Id.*, Appendix A, Category VII.G; *see also*, *Administrative Law Judge's Ruling Granting San Diego Gas & Electric Company's May 21, 2007 Amendment to April 3, 2007 Motion and May 22, 2007 Amendment to August 1, 2006 Motion*, issued June 28, 2007 in R.06-05-027, p. 3.

[28/] *See* D.06-06-066, as amended by D.07-05-032, *mimeo*, pp. 36-37.

The respective windows of confidential treatment adopted for various categories of procurement information have served both ratepayer customers and the market well over the past seven years. The existence of the confidentiality rules have plainly not hindered development of the renewables market, as evidenced by the large number of projects that have come online over the past seven years. Likewise, the steady decline in prices due, at least in part, to the effectiveness of the current confidentiality rules and the resulting prevention of market manipulation has helped to protect ratepayers against unreasonable RPS costs. Accordingly, the Commission should maintain its current rules regarding confidential treatment of RPS procurement data and should reject the rule changes suggested in the Proposal.

C. The Proposal is Unlawful and Violates Commission Precedent

In D.06-06-066, the Commission acknowledged that "the Legislature has made provisions for confidential treatment of certain documents, and . . . we are not at liberty to ignore those protections."[29/] It noted that "[t]he Legislature easily could have prohibited all use of confidential information if that were its intent," and further that "SB 1488 directs the Commission to examine the issue of confidentiality, not outlaw all protections."[30/] The 13-month process undertaken in R.05-06-040 to develop the confidentiality rules ultimately adopted was deliberate and thorough. It involved submission of extensive comments by parties, five days of evidentiary hearings on the scope of electric procurement confidentiality, several meet and confer sessions by the parties on the contents of the Matrix, submission of final recommendations in two separate versions of the Matrix (one for IOUs and one for ESPs) and briefing by parties to the proceeding.[31/]

[29/] *Id.* at p. 15.
[30/] *Id.*
[31/] *Id.* at p. 7.

The Proposal, by contrast, is supported by no record evidence. It relies on reasoning that is misguided and ill-informed, and that ignores basic principles of economic theory. The Proposal disregards the Commission's judicious analysis in D.06-06-066 and its careful balancing of competing imperatives, and runs afoul of established law. If the Proposal is adopted – and the RPS procurement data presented to the Commission is essentially stripped of confidential protection – the result would be disclosure of market sensitive and trade secret information in direct violation of the Commission's statutory and constitutional duties as described in D.06-06-066.

As discussed below, information regarding (i) utility net open position; (ii) contract pricing; and (iii) project evaluation/status is market sensitive, trade secret information that must be protected from disclosure for a period of time long enough to prevent harm. The nature of this information and the harm caused by its disclosure has not changed materially since D.06-06-066 was adopted. Indeed, the most notable change that has occurred since adoption of D.06-06-066 is the shift from a "seller's market" to a "buyer's market" in California's renewable energy market. While greater disclosure of RPS procurement data might arguably, given the current state of the market, place downward pressure on prices, the Commission must maintain regulatory certainty; buyers may have a market advantage today, but the opposite may be true tomorrow. The Commission cannot and should not engage in regulatory somersaults or enact rule revisions that lurch from one extreme to the other and then back again as market conditions change. The record of R.05-06-040 amply demonstrates the confidential nature of the information at issue here. The record of the instant proceeding, on the other hand, is clearly insufficient to permit the Commission to disturb the well-settled principles of confidential treatment adopted in D.06-06-066. Accordingly, the Proposal should be rejected in its entirety.

(i) RPS Net Open Information

The utility net open (short/long) position for energy is the difference between the energy procured by the IOU and the forecasted need for energy during a specified time period. Section VI of the IOU Matrix protects utility net open information for a period of up to 4 years (current year plus 3 years forward). The Commission noted in D.06-06-066 that there was little disagreement among the parties to the proceeding regarding the need for confidential treatment of utility net open information.[32/] Nevertheless, as discussed in Section III.E below, the Proposal contains several provisions that would significantly scale back the protection afforded under the Matrix. SDG&E submits that the proposed revision to Section VI of the Matrix is ill-conceived and contrary to law.

Disclosure of utility net open information would provide market participants with insight into SDG&E's procurement needs. The economic law of supply and demand explains the inherent link between supply/demand and market pricing. The theory states that prices are determined by the interaction of supply and demand; an increase in supply will lower prices if not accompanied by increased demand, and an increase in demand will raise prices unless accompanied by increased supply.[33/] This interplay between supply and demand is fundamental to pricing, and a selling party with knowledge of the buyer's need has a clear advantage in terms of the pricing offered. Thus, basic economic principles establish that information regarding a utility's procurement need will potentially impact the market price for electricity paid by the IOUs, and ultimately utility ratepayers.

[32/] *Id.* at p. 35.

[33/] *See, e.g.*, http://dictionary.reference.com/browse/law+of+supply+and+demand?s=t.

Meeting the aggressive goal of 33% renewables by 2020 will require SDG&E to conduct procurement activities within a specified time period. Although SDG&E discloses general information regarding whether it has a need to procure RPS products during each compliance period, SDG&E does not disclose the specific volumes that it must procure. The Commission included in D.06-0-066 a reference to expert testimony by economist, Dr. Charles R. Plott, regarding the market impact of disclosure of a utility's net short position. Dr. Plott testified that:

> [T]he behavior of bidders at auction is sensitive to their beliefs about the behavior of other bidders, and those central beliefs are coordinated by the announcement of the R[esidual] N[et] S[hort].
> . . .
>
> *[L]ower cost bids are increased to near the highest bid when the (RNS) is large*. With a large amount to be procured, the bidder knows that bids just below an expected price will be accepted, and so the bidder raises the prices on the low cost units to just below the safe bidding levels. The bidder wants to get as high a price as possible without exposure to the risk of losing the bid to a competitor. Accordingly, the profit margins on the low cost units increase dramatically.[34/]

Thus, if the market becomes aware that SDG&E will experience a high net short position near the end of a compliance period, it is likely that renewable energy prices will rise in response to SDG&E's high demand. If, on the other hand, the market becomes aware that SDG&E has low demand for new projects, bidders in SDG&E's RPS solicitations may artificially reduce pricing and then seek contract re-pricing at a later point. Given the obvious potential for disclosure of net open information to affect market pricing, it is clear that RPS net open information is "market sensitive" procurement data that must be protected under § 454.5(g) for a period long enough to ensure that disclosure will not impact market prices.

[34/] D.06-06-066, as amended by D.07-05-032, *mimeo*, pp. 18-19 (emphasis in original).

In addition, RPS net open data is trade secret information that must be protected under the Public Records Act, Govt. Code § 6254(k). In an economic study co-authored by Dr. Plott and Dr. Timothy N. Cason evaluating the market implications of requiring utilities to reveal non-public demand information, the research revealed that "negotiated prices tend to favor the information-advantaged side of the market."[35/] Thus, net open information derives independent economic value (in the form of avoided procurement costs) from not being generally known to developers, who could obtain value from its disclosure by increasing bid prices (or prices offered bilaterally). Given this fact, utility net open position information is properly characterized as trade secret information that must be protected under Govt. Code § 6254(k) for a period long enough to ensure that no harm occurs as the result of its disclosure.

In addition to the statutory obligation to protect utility net open information from disclosure, Commission rules and precedent support maintaining the confidentiality of this information. Utility net open information must be protected under G.O. 66-C since its disclosure would place the regulated company at an unfair business disadvantage. Disclosure of net short data would provide unfair negotiating leverage to counterparties, potentially allowing them to raise prices or impose unfavorable contract terms and conditions. In addition to this fairly obvious risk, disclosure of information regarding *low* demand could also create an unfair business disadvantage for the IOUs – namely, the risk noted above that a generator will under-price its project in order to obtain contract approval and then seek to re-price the contract at a later time. Once a generator has a Commission-approved contract, it is in a far better negotiating position than when it is simply a project on the IOU's shortlist, while the IOU has correspondingly less negotiating leverage. Thus, disclosure of the fact that an IOU is in a net

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[35/] Cason, Timothy N. and Plott, Charles R., *Forced Information Disclosure and the Fallacy of Transparency in Markets*. Economic Inquiry, Vol. 43, Issue 4, pp. 699-714, 2005. Available at SSRN: http://ssrn.com/abstract=906345 and attached hereto with permission of the author.

long position would encourage gaming of the process by generators, and would create a business disadvantage for the IOU. Accordingly, G.O. 66-C requires that RPS net open data be protected from disclosure.

Finally, from a ratepayer protection perspective, it is clear that disclosure of utility net open data would harm utility ratepayers. As noted above, if SDG&E experiences a high RPS net short, and this fact is disclosed to the market, the result would likely be a rise in renewable energy prices, which would produce a corresponding rise in RPS compliance costs for SDG&E's ratepayer customers. Conversely, if the market becomes aware that SDG&E has low demand for new projects, bidders in SDG&E's RPS solicitations may artificially reduce pricing in order to ensure selection and Commission approval of a contract, and then seek contract re-pricing at a subsequent point. This creates delay, burdens the administrative process and results in increased risk of project failure and increased costs of RPS compliance.

Indeed, the above-referenced economic study regarding the impact of disclosure to the market of non-public utility demand data concluded that "[f]orcing the utilities to reveal confidential information regarding their energy demands to suppliers leads to higher negotiated prices and ultimately higher electricity prices for California consumers," and further that "[i]f public utility regulators are concerned about benefitting ratepayers, our results indicate that this goal is *not* achieved by revealing demand information to sellers."[36/] Thus, given the potential for disclosure of specific RPS net open data to affect the price paid by SDG&E ratepayers for renewable energy, and the ratepayer harm caused by such disclosure, this information must be protected from disclosure for a period long enough to avoid market manipulation.

[36/] *Id*. at pp. 700 and 701(emphasis in original).

(ii) Contract Pricing Information

The legal analysis of the confidential nature of contract pricing data is fairly straightforward. It is beyond dispute that disclosure of the pricing offered by market participants has the potential to materially affect the market price for electricity – the concept of beating a competitor's price in order to win the deal is a well-known concept in most, if not all, competitive markets – thus, pricing is market sensitive information that must be protected from disclosure under § 454.5(g). Likewise, contract pricing information constitutes trade secret information that must be protected under the Public Records Act, Govt. Code § 6254(k). Information regarding contract pricing derives independent economic value (in the form of avoided procurement costs) from not being generally known to developers, who could obtain value from its disclosure by increasing bid prices (or prices offered bilaterally). Given the above, contract pricing is properly characterized as market sensitive, trade secret information that the Commission is obligated to protect as confidential for a period of time long enough to ensure that no harm occurs as the result of its disclosure.

In addition, contract pricing is properly treated as confidential pursuant to G.O. 66-C and under general principles of ratepayer protection. Disclosure of pricing information for a particular contract could provide other parties with whom SDG&E is currently negotiating with leverage to demand higher pricing, which would unfairly undermine SDG&E's negotiation position and would ultimately result in increased RPS compliance costs for ratepayers. Premature disclosure of contract pricing would create a price "target" that would encourage sellers to set their pricing at a level that is unreasonably high or artificially low given their costs. Either outcome would result in significant ratepayer harm. An increase in contract pricing translates directly into higher costs for ratepayer customers. On the other hand, if sellers offer

artificially reduce pricing in order to execute a deal and secure Commission approval of a contract, they could seek a contract amendment at a later date to increase the price. The end result would be delay and a burdening of the administrative process, and either a higher contract price for utility ratepayers or a failed RPS contract (which may also impose costs on ratepayers and jeopardize the State's RPS goals).

Disclosure of contract pricing also creates the risk that bidders who may have offered a lower price, but whose projects were not selected for the utility shortlist based on other factors, will interfere with the transaction and challenge the contract on legal or other grounds. While any such challenge may lack merit, the need to resolve the matter would unreasonably burden the resources of the utility and possibly the Commission. Thus, it is clear that contract pricing information must be treated as confidential information and must be protected for a period long enough to ensure that disclosure will not impact market prices or cause other ratepayer harm.

(iii) Project Evaluation/Status Information

Information regarding the evaluation/status of RPS project is inextricably linked to SDG&E's net open position. Clearly, information indicating that RPS projects will not come online when expected could reveal a utility procurement shortage/net short position. As detailed in Section (i) above, net short information has the potential to materially affect the market price for electricity and derives independent economic value (in the form of avoided procurement costs) from not being generally known to developers, who could obtain value from

its disclosure by increasing bid prices (or prices offered bilaterally). Accordingly, project evaluation/status information is market sensitive and trade secret information that must be protected from disclosure under § 454.5(g) and the Public Records Act, Govt. Code § 6254(k), for a period long enough to prevent harm.[37/]

The Commission has historically protected information related to the evaluation/status of RPS developers' projects as confidential under Section VII.G of the IOU Matrix, which protects analyses and evaluations of proposed RPS projects.[38/] This reflects the concern that, in addition to providing insight into the IOUs' potential net short positions, disclosure of project evaluation/status information is typically viewed as highly problematic from a developer standpoint. The project evaluation/status information provided to the Commission relates directly to viability of the relevant RPS projects and identifies barriers to project success. Disclosure of this extremely sensitive information could hamper developers' ability to negotiate necessary contracts and/or invite interference with project development by competitors. For example, knowledge that fuel/resource supply is inadequate for a particular project could prompt potential fuel suppliers or owners of land where wind, solar, geothermal projects are located to raise the price for fuel or land lease payments offered to that developer.

Thus, requiring disclosure of the commercially sensitive details of developers' projects could chill participation in future RPS solicitations. This could materially impact market pricing, place the IOUs at an unfair business disadvantage in violation of G.O. 66-C and ultimately result in an increase in the RPS cost burden borne by ratepayers. A similar situation was created in 2002 when the Commission adopted Standard of Conduct #7 in Rulemaking 01-

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37/ This information may also be protected under other State confidentiality rules such as the California Air Resources Board's prohibition on providing public information regarding future carbon price expectations.

38/ D.06-06-066, as amended by D.07-05-032, *mimeo*, Attachment A; *Administrative Law Judge's Ruling Granting San Diego Gas & Electric Company's May 21, 2007 Amendment to April 3, 2007 Motion and May 22, 2007 Amendment to August 1, 2006 Motion*, issued June 28, 2007 in R.06-05-027, p. 3.

10-024. Standard of Conduct #7 required all parties to procurement contracts, *including non-jurisdictional suppliers*, to submit to discovery requests by the Commission.[39/] Suppliers found this requirement to be highly objectionable and SDG&E was ultimately forced to file an emergency motion, which was supported by Pacific Gas & Electric Company ("PG&E") and Southern California Edison Company ("SCE"), seeking suspension of Standard of Conduct #7 on the grounds that inclusion of the provision in its procurement contract was preventing SDG&E's ability to finalize agreements with short-listed suppliers. The Commission granted SDG&E's request and suspended application of Standard of Conduct #7 for the IOUs' 2003 short-term procurement plans.[40/] Subsequently, in D.03-06-067, the Commission granted the request that Standard of Conduct #7 be permanently deleted, concluding that Standard of Conduct #7 was "commercially unacceptable to a significant majority of energy suppliers."[41/]

The risk acknowledged in D.03-06-067, that imposition of commercially objectionable requirements on non-jurisdictional entities will impede the procurement efforts of the IOUs, exists equally in the instant case. SDG&E depends on the developers with whom it interacts to provide candid, detailed information regarding project evaluation/status and the development team. Without being able to confirm that such information will be protected if disclosed to the Commission, it is unlikely that such developers will agree to share this information. The fear that the Commission, by requiring disclosure of this information, will create a free and ready source of accurate market intelligence for other market participants may prompt potential sellers to opt out of the California market altogether. The resulting decrease in available projects would place upward pressure on renewable energy rates, particularly given statutory compliance deadlines.

[39/] *See* D.02-10-062, *mimeo*, p. 52.
[40/] D.02-12-080, *mimeo*, pp. 5-6.
[41/] D.03-06-067, *mimeo*, Finding of Fact 3.

Plainly, requiring disclosure of RPS project evaluation/status information presents the same legal concerns as disclosure of utility net short information. In addition, it would undermine significantly further development of the RPS market in California. In that respect, a rule requiring premature disclosure of project evaluation/status information violates Guiding Principle 1 articulated in the Ruling – *i.e.*, that confidentiality rules should "respond to and support robust development of the RPS market."[42/] Requiring such disclosure would cause significant harm to utility ratepayers, who ultimately pay the costs of RPS procurement. In order to avoid running afoul of statutory obligations and to prevent ratepayer harm, RPS project evaluation/status information must be protected from disclosure for a period long enough to prevent the harm described above.[43/]

D. Responses to Questions Set Forth in the Ruling

The Ruling directs parties to provide responses to seven specific questions set forth in the Ruling.[44/] It requests that parties consider the questions in connection with the Proposal as a whole and with respect to the individual components of the Proposal. SDG&E provides responses to each question set forth in the Ruling below. While the responses provided relate to the Proposal as a whole, they apply equally to the individual components of the Proposal. For the reasons detailed herein, SDG&E recommends that the Proposal be rejected in its entirety. To the extent certain changes included in the Proposal are reasonable, such as making ESP disclosure requirements equivalent to those of the IOUs, SDG&E suggests that those rule revisions be taken up separately rather than in the context of the Proposal.

[42/] Ruling, p. 7.

[43/] SDG&E notes that certain project status information is public – for example, status of permits, signing of interconnection agreements, etc. Thus, the public has some degree of insight into project status.

[44/] Ruling, pp. 5-6.

Responses

1. *Would the proposal promote transparency and the public interest with respect to the RPS program?*

   Regardless of whether greater transparency might arguably result, adoption of the Proposal would be unlawful and contrary to the public interest, as discussed herein. Thus, the Proposal should be rejected.

2. *Would the proposal contribute to improved decision-making by the Commission?*

   No. SDG&E believes that the current, established practices of the Commission have proven effective in facilitating decision-making and that no rule revisions are required to achieve this objective. That is, current rules enable Commission decision making and to the extent market sensitive information is necessary in that process, such information is provided under seal.

3. *Would the proposal contribute to improved coordination between the Commission and other agencies and organizations with respect to California's energy policy, procurement planning and/or transmission planning?*

   No. SDG&E believes that the current, established practices of the Commission in coordinating with other agencies/organizations concerning procurement and transmission planning issues are effective, and that the current confidentiality rules do not prevent the Commission from engaging in necessary coordination activity. As discussed below, the governmental and other organizations involved in these matters each have processes in place to protect confidential information from disclosure. To the extent a need exists for these organizations to have greater visibility into RPS procurement data, SDG&E submits that it is not necessary to eliminate current confidentiality protections applicable to this information in order to achieve this

outcome. Rather, data can be provided to these organizations as it currently is – *i.e.,* in accordance with each organizations' established non-disclosure procedures.

4. *Would the proposal improve the value received by the customers of retail sellers from RPS procurement?*

   No. As discussed herein, adoption of the Proposal would result in unnecessary and potentially significant increased costs for utility ratepayers.

5. *Would the proposal as a whole contribute to the long-term stability of the RPS market?*

   No. As discussed herein, adoption of the Proposal would create price instability and discourage project development, among other concerns.

6. *Would the proposal provide appropriate prot ection to information for which there is a legitimate need for confidentiality?*

   No. The Commission adopted general guidelines for protection of market sensitive, trade secret procurement data in D.06-06-066 based upon a well-developed evidentiary record. It concluded, consistent with its statutory obligation to protect market sensitive, trade secret information and its fundamental duty to protect ratepayers from unreasonable RPS costs, that contract pricing, utility net open and project evaluation/status data must be protected for a period of three years forward. This period of confidential protection has served both ratepayers and the market well over the past seven years. The evidentiary record of the instant proceeding is wholly inadequate to justify a Commission decision to drastically reduce the period of confidential protection provided to this information. Accordingly, the Proposal must be rejected.

7. *What, if any, legal issues might exist with respect to the implementation of the proposal?*

   SDG&E believes the Proposal is ill-conceived and unlawful. Please see the discussion set forth in Section III.C above for further detail.

E. Analysis of Specific Provisions of the Proposal

SDG&E provides its analysis of specific provisions of the Proposal below. The Ruling advises that it is not necessary to reproduce the section being addresses and that parties may instead identify the topic being addressed through reference to the topic section and subsection (*e.g.*, E.2).[45/] Accordingly, SDG&E follows this convention in discussing the specific provisions of the Proposal.

(i) Section C.1

SDG&E supports this provision. The confidential treatment afforded to compliance report information should be identical for all retail sellers.

(ii) Section C.2

SDG&E does not support this provision. Currently, the IOUs' bundled retail sales forecast, from which the RPS obligation and Renewables Net Short ("RNS") are derived, is protected under Matrix Category V.C for a period of up to four years (current year plus 3 years forward). Related net open information is protected under Matrix Category VI. As a result, an IOU may procure for the near-term without revealing its forecasted bundled load or net short position for any years during the near-term compliance period. This protects ratepayers by ensuring that market participants cannot manipulate the market in response to net open information by either artificially inflating or reducing prices.

Requiring the IOUs to publicly disclose forecasted bundled load and related need information after 3 years (current year plus years forward) would provide market participants with near-term market sensitive and trade secret information regarding the IOU's net open position, which would confer an unfair advantage on parties that the IOU is currently

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[45/] Ruling, p. 7.

negotiating with for deliveries during that time frame. Net short information could be used as negotiation leverage by generators to materially increase contract prices (or artificially decrease prices and seek a later re-pricing). This would ultimately impact utility ratepayers through increased costs of RPS compliance.

The disclosure requirement would also result in disclosure of compliance period need. For example, SDG&E would be required under the proposed rule to make its 2016 bundled forecast and need data public in its 2013 compliance reporting. This could also mean that aggregated Compliance Period ("CP") 2 data would be public (since confidentiality rules require public disclosure of data that can be aggregated to protect confidential information, the Commission may require public disclosure of aggregated CP 2 data, which includes 2014, 2015, and 2016 numbers). This is the need data that is most sensitive because it relates to the statutory RPS compliance requirement and potential enforcement penalties. Knowledge of CP open information would allow a generator to inflate contract prices in order to capitalize on a situation in which a retail seller is in a net short position close to the end of a CP and must either procure or risk non-compliance penalties The current rule prevents this problematic outcome by protecting 4 years of data (current year +3).

While staff may perceive that public disclosure of bundled load forecasts and related net open data would be helpful in performance of reporting duties to the Legislature, legal requirements should not be violated and ratepayer interests should not be compromised simply to reduce the burden associated with administrative tasks. This proposal runs afoul of the

Commission's statutory obligations under § 454.5(g) and the Public Records Act, Govt. Code § 6254(k). It also violates G.O. 66-C and the Commission's fundamental obligation to protect ratepayers from unreasonable RPS procurement costs. Finally, it contravenes the Ruling's Guiding Principle 5 since it clearly creates a risk of ratepayer harm.

(iii) Section C.3

SDG&E objects to this proposal on the same grounds as cited above in connection with Section C.2. This revision to IOU Matrix category VI.B would provide market participants with near-term market sensitive information regarding a retail seller's net open position which could then be used as negotiation leverage to materially increase contract prices. This would result in higher RPS compliance costs being imposed on utility ratepayers. As explained above, RPS procurement occurs on an annual basis. Therefore the first rationale offered in support of the proposal – that it is no longer necessary to protect near-term need because compliance is measured over a CP – is incorrect. Since the IOUs procure RPS generation on an annual basis, disclosure of near-term net open information has the potential to materially affect the IOUs (or more accurately, ratepayer customers') market price for electricity. Accordingly, it *must* be protected under §454.5 (g) for a period of time long enough to prevent harm.[46/] Disclosure of net open information would also contravene Public Records Act, Govt. Code § 6254(k) and G.O. 66-C, as discussed in Section III.C.i above. Finally, requiring disclosure of market sensitive net open information would provide an unfair negotiating advantage to generators at the direct expense of utility ratepayers. Thus, it would violate the Commission's fundamental obligation to protect ratepayers from unreasonable RPS procurement costs.

[46/] *See* D.06-06-066, as amended by D.07-05-032, *mimeo*, p. 44.

The additional support offered for the proposed elimination of current confidentiality protection for net open data are without merit. Contrary to the suggestion made in the third rationale, public availability of near-term need data represents future need, not cost, and would therefore not provide ratepayer customers with information regarding what they are paying for. Moreover, ratepayer customers' representatives, such as DRA and TURN, have access to this information under the current confidentiality rules. The fourth rationale is equally inaccurate as market certainty and stability would not be served by releasing market sensitive information to market participants. Release of this market sensitive data would encourage market manipulation and increase the costs of RPS compliance ultimately borne by ratepayers.

The fourth rationale offered in support of the revision assumes that public disclosure of net open information is necessary to permit the CAISO to perform its transmission planning duties. This is plainly not the case. The CAISO can request this data and would treat it confidentially under Section 20 of the CAISO tariff. Thus, continued confidential treatment of this information presents no bar to the CAISO's ability to perform its transmission planning duties. Similarly, the Commission has full access to confidential net open data and may request it in the context of the LTPP proceeding. In short, the Commission and CAISO currently have full access to net open data and procedures in place to maintain its confidentiality. Thus, the need to ensure CAISO/CEC access does not serve as justification for requiring greater disclosure to market participants.

As discussed above, while staff may perceive that public disclosure of bundled load forecasts and related net open data would be helpful in performance of reporting duties to the Legislature, legal requirements should not be violated and ratepayer interests should not be compromised simply to reduce the burden associated with administrative tasks. This proposal

violates the Commission's statutory obligations under § 454.5(g) and the Public Records Act, Govt. Code § 6254(k). It also contravenes G.O. 66-C and the Commission's fundamental obligation to protect ratepayers from unreasonable RPS procurement costs. Finally, it is contrary to Guiding Principle 5 since it would result in ratepayer harm.

(iv) Section C.4

SDG&E submits that its resources would be most efficiently utilized by focusing on current compliance and therefore does not support this provision, which would require compilation of historical data for public distribution. As noted in the proposal, this information is already available to the public in the form of prior compliance reports. The effort to collect, synthesize and prepare historical data for presentation is unrelated to, and indeed would divert resources from, the necessary focus of all retail sellers – future RPS procurement. The rationale offered in support of the provision of aligning California's RPS reporting with that of other states in the Western Electricity Coordinating Council ("WECC") is not compelling; other states' practices have little bearing on California's RPS program and the limited value derived does not justify the major work effort involved.

(v) Section D.1

SDG&E does not support this provision of the Proposal. As discussed in Section III.C.ii above, premature disclosure of pricing information violates § 454.5(g), the Public Records Act and G.O. 66-C. It also runs afoul of the Commission's fundamental obligation to protect ratepayers from unreasonable RPS procurement costs.

Premature disclosure of contract pricing clearly has the potential to materially affect the market price for electricity by creating a "price target" for competitors. In addition, information regarding contract pricing derives independent economic value (in the form of avoided

procurement costs) from not being generally known to developers, who could obtain value from its disclosure by increasing bid prices (or prices offered bilaterally). Finally, contract pricing is properly treated as confidential pursuant to G.O. 66-C and under general principles of ratepayer protection. Disclosure of pricing information for a particular contract could provide other parties with whom SDG&E is currently negotiating with leverage to demand higher pricing, which would unfairly undermine SDG&E's negotiation position and would ultimately result in increased cost to ratepayers.

Premature disclosure of contract pricing could encourage sellers to set their pricing at a level that is unreasonably high or artificially low given their costs. Either outcome would cause significant harm to ratepayers. As discussed above, an increase in contract pricing translates directly into higher costs for ratepayer customers. On the other hand, if sellers artificially reduce pricing in order to execute a deal and secure Commission approval of a contract, they could seek a contract amendment at a later date to increase the price. The end result would be delay and a burdening of the administrative process, and either a higher contract price for utility ratepayers or a failed RPS contract (which would also impose costs on ratepayers and would undermine the State's RPS goals). Accordingly, contract pricing is properly characterized as market sensitive, trade secret information that the Commission is obligated to protect as confidential for a period of time long enough to ensure that no harm occurs as the result of its disclosure.

The proposed revisions to IOU Matrix categories VII.F and VII.G would significantly scale back confidential protection of market sensitive pricing data. It would require disclosure of contract pricing information to market participants, which could then be used as negotiation leverage to significantly inflate the contract prices paid by utility ratepayers. The proposal

could also discourage RPS investment in California since developers would object to disclosure of their offered pricing so soon after negotiation. To illustrate the impact of the creation of price targets and a reduction in competition on utility ratepayers, consider the following examples:

- Scenario 1: Developer A is negotiating a contract with IOU 1 and during the negotiations it is disclosed that IOU 3 paid a higher price for Developer B's project. Developer A could use this data to:
  - Negotiate a price above its required rate of return with IOU 1, to the detriment of IOU 1's ratepayers.
  - Bid into IOU 3's next solicitation at a price above its required rate of return but close to the recently disclosed price knowing the bid would likely result in a contract, to the detriment of IOU 3's ratepayers.
- Scenario 2: Developer C is negotiating a contract with IOU 2, and the price will soon become public. While Developer C has the capability to develop additional projects to sell to other retail sellers in the State, it waits several years until the price of this contract is outdated and cannot impact its new project negotiations, or elects to build in another state. This reduces competition, placing upward pressure on RPS contract prices, to the detriment of all ratepayers.

The bottom line is that contract pricing information must remain confidential for a period of time long enough to avoid impacting other ongoing negotiations and to prevent market manipulation. This is important for both for the utilities, who wish to prevent developers from using pricing data from other contracts to artificially inflate their own pricing, and for developers, who wish to avoid being held to pricing from a separate contract negotiation. Since negotiations can frequently continue for a year or more, the 3-year period currently allowed in the Matrix has been sufficient in the past. Contract negotiations occur with projects that have met least-cost, best fit ("LCBF") criteria, as demonstrated by retail seller analysis. The resulting contract price should not depend on the pricing of other contracts, but instead should be a function of project economics.

The first two rationales offered in support of this proposal assume that the market is mature and therefore too large to feel the impact of one price disclosure, and that the risk applies only to the contract for which the price is disclosed. This is plainly not the case for the following reasons: (i) more than one project from each retail seller will be submitted via application, leading to multiple price disclosures over a period of time; and (ii) retail sellers and developers do not negotiate one contract at a time, but have multiple contracts at various stages of negotiation over a period of time. It is important to understand that procurement by retail sellers does not occur in a silo; contract pricing disclosure by any retail seller would impact the ongoing negotiations of *all* retail sellers, leading to the creation of price targets. As discussed in Section III.C.ii above, price targets would clearly burden ratepayers, but this proposal has the added risk of stifling market development – and therefore competition – in California, which would further exacerbate the negative impact on utility ratepayers. The third and fourth rationales are premised on the claim that the current rules do not permit "public discussion" of the price of RPS contracts. This assertion is false – consumer protection organizations such as DRA and The Utility Reform Network ("TURN") can, and routinely do, review confidential data and provide comment on proposed contracts submitted for Commission approval.

The proposal to modify current confidential protection of pricing data should be rejected as violating § 454.5(g), the Public Records Act, G.O. 66-C and the Commission's fundamental obligation to protect ratepayers from unreasonable RPS procurement costs. This proposal runs afoul of the Commission's Guiding Principle 5, as it clearly puts ratepayers at risk, and does not meet the standard of Guiding Principle 1, as it would undermine development of the RPS market.

(vi) Section D.2

SDG&E objects to this proposal on the same grounds as the preceding proposal.

(vii) Section D.3

SDG&E objects to this provision on grounds identical to those set forth above in connection with Section D.1. As discussed above, the proposed disclosure of contract pricing information violates § 454.5(g), the Public Records Act and G.O. 66-C, and is contrary to the Commission's duty to protect ratepayers from unreasonable RPS procurement costs.

The proposal to require disclosure of LCBF analysis information would cause significant ratepayer harm, if adopted. This proposal would: (a) provide information to market participants that could subsequently be used to materially inflate contract prices through the gaming of future IOU solicitations or bilateral negotiations, which would increase RPS costs borne by utility ratepayers; and (b) release fresh project data which could impact a developer's ongoing negotiations and therefore act as a disincentive to development in California, ultimately reducing competition and placing upward pressure on contract pricing, to the detriment of utility ratepayers in the State.

With respect to gaming, if this proposal is adopted it would allow market participants to see all LCBF variables and how each is evaluated in detail. Market participants could then use this information to test scenarios and determine how to present future bids so that they are evaluated with the most favorable result – this would benefit generators, to be sure, but could harm ratepayers if the gaming produced results that are inaccurate or result in selection of sub-optimal projects. The current LCBF description document, which is included in all RPS Procurement Plans and is publicly available, provides sufficient detail to market participants regarding evaluation methodology and the information required to bid into a request-for-offers

("RFO") – there is no need to provide market participants with specific examples of successful projects as this proposal would require; to do so would be irresponsible and create a significant risk for ratepayers.

This proposal also compounds the risk of market contraction described above by exposing a project's entire evaluation along with its price. This would make any developer hesitant to sign a contract in California, as the disclosure of commercially sensitive, non-public details of a developer's projects could impact *any* of that developer's ongoing negotiations. Developers often negotiate not only the total contract price, but also the value of individual components of the product, which would be disclosed as part of the LCBF analysis. The Commission already has access to this data, thus, public disclosure of this information is not necessary to achieve that objective.

Adoption of this proposal would violate the Commission's statutory obligations, as well as its duty to protect ratepayers from unreasonable RPS costs. This proposal plainly runs afoul of the Commission's Guiding Principle 5 as it clearly puts ratepayers at risk, and would impair rather than support the goal of Guiding Principle 1 to respond to and support robust development of the RPS market.

(viii) Section D.4

SDG&E does not object to the disclosure of contract pricing that is already public. For example SDG&E's existing WATER and CRE Feed-in Tariff pricing is set at the Commission determined market price referent ("MPR"), and the pricing for the Re-MAT Feed-in Tariff (which will replace these two programs) will be public and will adjust based on market participation. These prices are for a particular subset of projects that are eligible for and elect to participate in these programs, and the disclosure of these prices will not impact the larger

renewables market. However, in the event a program is created in the future that utilizes a standard contract and whose pricing is dependent upon bids (as is the RAM program and utility-scale RFOs), contract pricing data for such program(s) must be protected from disclosure for a period long enough to prevent harm.

(ix) Section E.1

SDG&E already makes prior actual MWh procured by year and aggregated by technology public in its RPS Procurement Plan (as long as the category contains at least two contracts), and does not object to a continuation of this practice.

(x) Section E.2

SDG&E already makes prior actual expenditures by year and aggregated by technology public in its RPS Procurement Plan (as long as the category contains at least two contracts), and does not object to a continuation of this practice.

(xi) Section E.3

SDG&E already makes future estimated expenditures by year and aggregated by technology public in its RPS Procurement Plan (as long as the category contains at least two contracts), and does not object to a continuation of this practice.

(xii) Section E.4

SDG&E does not support the proposal to require disclosure of RFO bid data. This revision to IOU Matrix category VIII.A would provide market participants with the number of bids received or shortlisted from any RFO, which could reveal utility net short data. As discussed above, utility net short information is market sensitive, trade secret data protected under § 454.5(g), the Public Records Act and G.O. 66-C, and its premature disclosure violates the Commission's obligation to protect ratepayers from unreasonable RPS procurement costs.

Disclosure of the IOUs' market sensitive net short data would provide sellers with negotiation leverage to materially increase contract prices, with the increased cost ultimately being borne by utility ratepayers. SDG&E already publicizes an estimated range of the volumes being sought through each RFO. This information is sufficient to allow market participants to determine the size of projects to offer. Releasing the number of bids shortlisted would allow developers on the shortlist to gauge whether SDG&E's RPS need is high or low. They could use this information to artificially inflate their prices. This data could also influence future contract prices. Consider a situation in which a retail seller is approaching a compliance deadline and holds an RFO to fill its remaining need – if the RFO response is not robust, the market would then know that the retail seller would likely be short close to the end of a CP and must either procure or risk non-compliance penalties.

This knowledge would provide market participants on the shortlist, as well as the market as a whole, with negotiation leverage that could then be used to inflate contract prices either through ongoing negotiations or by bidding into the next RFO at above-market prices to capitalize on this situation. This proposal would not impact the expenditure limitation effort as implied in the second rationale, as it does not provide cost data. Also, a contract would only be relevant to this statutory requirement when it officially becomes part of a retail seller's portfolio – at contract execution. The third rationale for this proposal assumes that this information is necessary for the CAISO to perform its transmission planning duties, however, the CAISO can request this data from SDG&E and would treat it confidentially under Section 20 of the CAISO tariff. Thus, public disclosure of this information to the market is not required in order to permit the CAISO to obtain access. Similarly, the Commission has full access to the

information and has procedures in place to maintain its confidentiality. Thus, the need to ensure such access does not serve as justification for requiring greater public disclosure.

While staff may perceive public disclosure of this data as helpful in performing its duties, ratepayer interests should not be compromised solely to simplify administrative tasks. This proposal clearly puts ratepayers at risk and therefore runs afoul of the Commission's Guiding Principle 5.

(xiii) Section F.1

SDG&E does not support this proposal which would essentially require full disclosure of commercially sensitive project details for all unsuccessfully bid projects into any RFO, thereby endangering future opportunities for non-selected projects. If implemented, this proposal would provide the market with sufficient detail to allow it to determine which projects did not make the shortlist. This knowledge could harm such projects' future opportunities as counterparties may assume that the projects suffer from viability issues when in fact the only reason for rejection may have been that they were not the proper fit for the retail seller at the time of the RFO. The proposal would likely discourage renewables developers from siting projects in California, which would lead to reduced competition in the renewables market and higher prices imposed on utility ratepayers.

The rationale supporting this proposal is that the information is necessary for the CAISO to perform its transmission planning duties. As noted above, however, the CAISO can request this data from SDG&E and would treat it as confidential under Section 20 of its tariff. Likewise, the Commission has full access to this information and procedures in place to protect its confidentiality. Thus, this rationale does not serve as justification for requiring disclosure or overcome the harm that would result. Furthermore, it is not clear that any valuable analysis

would result from use of the data in question. The projects at issue would not have been shortlisted and may never come to fruition; therefore utilizing this data for any planning purposes would not lead to useful results.

While staff may perceive that public disclosure of this data would help it to perform its duties, ratepayer interests and the Commission's statutory obligations must not be compromised simply to facilitate execution of administrative tasks. As discussed in Section III.C.3 above, requiring disclosure of RPS project evaluation/status information presents many of the same legal concerns as disclosure of utility net short information. In addition, requiring such disclosure would chill development of the RPS market in California. The proposal would result in harm to utility ratepayers, and therefore runs afoul of the Commission's Guiding Principle 5, and would hinder growth of the renewables market, in direct violation of Guiding Principle 1.

(xiv) Section F.2

SDG&E objects to this proposal on the same grounds as the preceding proposal. It would inform the market of the fact that the developer was not able to come to terms, which could impact the perception of the project to the market.

(xv) Section F.3

SDG&E strongly objects to this proposal as clearly violating § 454.5(g), the Public Records Act and G.O. 66-C, as well as the Commission's fundamental duty to protect ratepayers from unreasonable RPS procurement costs. The ratepayer harm caused by disclosure of bid prices *before* contracts from the solicitation have even been negotiated is obvious. The notion that bid pricing information would not affect negotiated contract prices is folly.

Under this proposal, just as the utility begins negotiating with the shortlisted counterparties, generators would receive public data on the prices of similar bids SDG&E received. Knowledge of bid prices would permit generators with lower-priced bids to demand a price increase or more favorable non-pricing terms and conditions; disclosure would provide a negotiating advantage to generators – a positive outcome for generators, but a negative outcome for utility ratepayers who ultimately pay the cost of higher priced contracts and less favorable contact terms.

Contract pricing disclosure in *any* form by any retail seller impacts the ongoing negotiations of all retail sellers, leading to the creation of price targets. The harm caused by establishing of price targets – whether it leads to unreasonably high prices or artificially reduced prices that are revisited at a later point in a contract re-pricing – is described in detail in Section III.C.iii. This proposal has the potential to materially impact multiple contract negotiations across the State and, as explained in more detail above, would stifle market development in California by reducing competition in the renewables market. This would place upward pressure on contract prices, negatively impacting all California ratepayers.

This proposal violates § 454.5(g), the Public Records Act and G.O. 66-C, and would expose ratepayers to unreasonable RPS procurement costs in contravention of the Commission's ratepayer protection obligation. The certainty that ratepayer customers would be saddled with higher contract prices upon adoption of this proposal makes it inconsistent with Guiding Principle 5, and the market manipulation and gaming that would result make it inconsistent with Guiding Principle 1. Plainly, bid prices of all bids received in response to each IOU's RPS solicitation must remain confidential, as established under the Commission's current rules.

(xvi) Section F.4

SDG&E already makes forecasted MWh by year and aggregated by technology public in its RPS Procurement Plan (as long as the category contains at least two contracts) along with a list of executed contracts, their capacity, location, and technology, and does not object to a continuation of this practice. However, SDG&E notes that it has not requested emissions data in the past, nor does it have contractual provisions with counterparties requiring them to provide this data. It is not clear how feasible it will be to collect this data, or what value it would add to the procurement and transmission planning processes as these are renewable projects presumably with little to no emissions. Accordingly, SDG&E objects to this aspect of the Proposal.

(xvii) Section F.5

SDG&E objects to this provision on the same grounds as described above in connection with Sections C.2 and C.3. Disclosure of this data would provide market participants with near-term market sensitive information regarding an IOU's net open position, which could then be used as negotiating leverage in order to manipulate contract prices, with the significant negative impact ultimately being borne by utility ratepayers.

For the reasons detailed in Section III.C.i above, the Commission is obligated to protect information that would reveal near-term utility net open positions for a period long enough to prevent market manipulation. If a generator has access to utility demand information and is aware that an IOU has an urgent need for renewable generation, increased contract pricing and

higher RPS costs for ratepayers will result. It is difficult for the market to make this determination for periods far off into the future because the IOUs position can change drastically over an extended period, but disclosure of a utility's RPS position data for the near-term plainly would allow generators to manipulate pricing in response to the IOUs' need.

This proposal may also heighten the risk of collusion between market participants. It is unlikely that this data would be able to be aggregated in a manner that would protect the identity of the parties on the shortlist. If the parties are revealed before contracts are final, as they would be if a retail seller disclosed capacity, location, and technology of shortlisted and bilateral projects as required by this proposal, it would greatly increase the risk that these parties could agree to collude during the negotiation period and raise their prices, unfairly increasing the RPS cost burden borne by utility ratepayers.

The rationale offered to support this proposal is that disclosure of the information is necessary for procurement and transmission decisions. This is plainly incorrect. Both the CAISO and the Commission currently have full access to this information. The CAISO can request this data from SDG&E and would treat it as confidential under Section 20 of its tariff. Likewise, the Commission may obtain this data under current confidentiality procedures. Thus, the suggestion that public disclosure of the information is necessary to enable access to the data by the CAISO and the Commission is erroneous.

While staff may perceive that public disclosure of this data would simplify the functions it performs, the Commission's statutory obligations to ensure confidential treatment of market sensitive, trade secret data information and its duty to protect utility ratepayers from

unreasonable RPS costs cannot be compromised in order to make administrative tasks easier to perform. This proposal would clearly cause ratepayer harm and therefore runs afoul of the Commission's Guiding Principle 5. Accordingly, it should be rejected.

In addition, as noted above, SDG&E has not requested or collected emissions data in the past, and cannot require current counterparties to provide this data. It is not clear that it would be feasible to collect this data, or what value it would add to the procurement and transmission planning processes as these are renewable projects presumably with little to no emissions. Accordingly, SDG&E also objects to this aspect of the Proposal.

(xviii) Section F.6

SDG&E does not support the disclosure of project viability and failure assessment assumptions as this could reveal utility net short positions and endanger future opportunities for these projects. As discussed in Section III.C.iii above, disclosure of this information would permit manipulation of contract pricing, deter market development, reduce competition, negatively impact SDG&E's relationships with counterparties and increasing SDG&E's litigation risk – all of which would ultimately impact ratepayers negatively.

In order to effectively plan for contingencies, SDG&E must assess the probability of success of each of the projects in its portfolio to ensure that it has procured a sufficient amount of renewable energy to guarantee compliance with statutory mandates. SDG&E uses the probability weightings that result from this internal assessment to determine its compliance position, which it then compares with its procurement target to determine if there is a net short that must be filled. All projects are unique, and will encounter various obstacles as they

proceed through development and into the commercial operations stage – these obstacles will result in various probability weightings over time. Removing confidential treatment of this internal planning tool means, at least for SDG&E, that the probability of success that SDG&E assigns to each project is public. This is a non-starter because:

- The probability weightings along with the public expected annual generation data would allow the market to determine SDG&E's near-term net open position.
- Disclosure of non-public project assessment information could negatively impact contract counterparties whose projects receive a probability weighting below 100%. This would, in turn, damage relationships that SDG&E had established with the counterparties, and could lead to litigation if the counterparty believes that the probability weighting disclosure has or would lead to a material impact on his/her company.
- Disclosure of commercially sensitive, non-public project information would likely discourage renewables development in California.

The stated rationale for this proposal is that this information is necessary for the CAISO to perform its transmission planning duties. Plainly, however, the CAISO can request this data from SDG&E and would treat it confidentially under Section 20 of its tariff, thus the suggestion that public disclosure of this information to generators and other market participants is necessary in order to achieve this objective is incorrect. Likewise, the Commission has full access to this information under its current confidentiality procedures. Thus, while staff may perceive that public disclosure of this data would be helpful to performance of its duties, the Commission's obligation to protect ratepayers should take precedence. This proposal runs afoul of the Commission's Guiding Principle 5, as it clearly puts ratepayers at risk, and is inconsistent with Guiding Principle 1, since it would hinder development of the renewables market in California.

(xix) Section F.7

SDG&E objects to this proposal on the same grounds as proposals D.1 through D.3. Pricing data should not be revealed while it can still impact ongoing negotiations throughout the State.

(xx) Section F.8

SDG&E does not support this proposal, which would allow ESPs and community choice aggregators ("CCAs") a greater amount of confidentiality protection of contract data than that afforded to IOUs, which unfairly disadvantages IOU ratepayers. As is pointed out in the Proposal, the time between contract execution and initial project deliveries could be as long as 10-12 years. Under this proposal, IOUs would disclose market sensitive price data shortly after contract execution, while ESPs and CCAs would be permitted to wait until thirty days after energy deliveries begin, potentially a difference of 10-12 years. If this proposal is adopted, IOU ratepayers will be subject to significant pricing risk, as explained above in connection with Section D.1 through D.3 and F.7, while ESP and CCA ratepayers will be shielded from such risk. This is clearly an inequitable outcome and a violation of both rationales offered in support of the proposal, which assume that this proposal is "roughly analogous" to what would be required of IOUs and that it conforms with SB 695, which requires that ESPs be subject to the same terms and conditions as electrical corporations. The Commission's first Guiding Principle is that the confidentiality rules should respond to and support robust development of the RPS market rationales – ESPs and CCAs are part of the statewide market, and as such should be subject to the same terms and conditions as IOUs.

(xxi) Section F.9

SDG&E objects to the second and third components of this proposal on the same grounds as set forth in connection with Section F.6 above. The significant ratepayer harm caused by premature disclosure of project evaluation/status data is described in detail in Section III.C.3 above.

The stated rationale for this proposal – that it will result in earlier access to and improve the accuracy of information provided to the CAISO and the Commission – makes little sense. The CAISO and Commission can request interconnection information at any time and can maintain its confidentiality pursuant to existing procedures. Requiring disclosure of this information to market participants will have no impact on the ability of the CAISO and the Commission to obtain accurate transmission information. This requirement would, however, have a significant negative impact on utility ratepayers, as discussed in Section III.C.iii above. Accordingly, the proposal should be rejected.

(xxii) Section F.10

SDG&E objects to this proposal on the same grounds as cited in response to Section D.1 though D.3 and F.7 above. Specifically, the retroactive application of confidentiality rules resulting from this proceeding could result in the premature release of market sensitive pricing data to market participants, which could then be used as negotiating leverage to materially inflate contract prices for all retail sellers. The proposal could also discourage development in California to the extent developers object to disclosure of their contract pricing terms soon after negotiation.

Currently, at the time a contract is amended – for example, by modifying the price – the confidentiality timeline for the contract restarts. If this proposal is adopted, it would bypass this standard by relying on the timeline of the "prior" contract and this could result in the disclosure of fresh contract pricing data which could impact a developer's ongoing negotiations and therefore act as a disincentive to development in California. This would ultimately reduce competition in the RPS market in California and placing upward pressure on contract pricing, to the detriment of all ratepayers in the State.

(xxiii) Section F.11

SDG&E objects to this proposal on the same grounds as described in response to proposals D.1 through D.3 and F.7. Disclosure would provide market sensitive, trade secret pricing data to market participants, which could then be used as negotiating leverage to materially increase contract prices at the expense of utility ratepayers. Disclosing the capital and operations costs of a project provides the elements necessary to estimate the contract price; thus, the risks are identical to those described above in connection with proposals D.1 through D.3 and F.7. Potential EPC contractors would likely object to public disclosure of the cost and operation expenses for their projects, which would discourage EPC contractors from participating in utility-owned generation ("UOG") projects. This would reduce competition, placing upward pressure on UOG pricing and negatively impacting ratepayers.

The Commission may request this information and maintain it as confidential under its current procedures, Thus, the rationale offered in support of the proposal – *i.e.*, that public availability of proposed UOG projects will "aid in the Commission's determination" of whether UOG projects meet specified criteria – is entirely lacking in merit. This proposal is inconsistent with the Commission's statutory obligation to protect market sensitive, trade secret information,

as well as its fundamental duty to protect utility ratepayers. Adoption of the proposal would harm ratepayers and discourage further development of the RPS market in California. Thus, it runs afoul of Guiding Principles 1 and 5.

(xxiv) Section G.1

SDG&E objects to this revision to IOU Matrix category VIII.B on the same grounds as cited in response to proposal D.3 – it would provide market sensitive pricing and evaluation data to market participants which could then be used as negotiation leverage to materially increase contract prices for all retail sellers, ultimately impacting all California ratepayers. Moreover, this proposal also requires the release of portfolio fit analysis to market participants, which is essentially net open data, compounding the risk of contract price inflation. Plainly, as discussed in detail above, neither pricing nor evaluation data should be disclosed while it could impact an existing negotiation.

The first rationale offered in support of the proposal assumes that this information would assist bidders in understanding and conforming to an IOU's procurement criteria. On the contrary, it would provide market participants with specific examples of successful projects that could then be used to test scenarios and manipulate future bids so that they are evaluated with the most favorable result. The second rationale assumes that the wealth of data released as a result of this proposal would mitigate any gaming risk. This is an incorrect assumption – more data points would provide market participants with greater certainty regarding how evaluations are performed, enabling them to more effectively game the solicitation process. The description of the evaluation methodology provided publicly in the RPS Plan should be sufficient guidance

for developers. The Commission already has access to this data, so it is not clear how public release would assist the Commission further. This proposal runs afoul of the Commission's Guiding Principle 5, since it creates the potential for significant ratepayer harm, and Guiding Principle 1, since it would interfere with development of the renewables market in California.

IV.
CONCLUSION

For the reasons cited herein, the Commission should reject the Proposal and maintain the rules related to confidential treatment of IOU RPS procurement data established in D.06-06-066, *et seq*.

Respectfully submitted this 5th day of August, 2013.

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Attachment

Forced Information Disclosure and the Fallacy of Transparency in Markets

FORCED INFORMATION DISCLOSURE AND THE FALLACY OF TRANSPARENCY IN MARKETS

TIMOTHY N. CASON and CHARLES R. PLOTT*

A theory advanced in regulatory hearings holds that market performance will be improved if one side of the market is forced to publicly reveal preferences. For example, wholesale electricity producers claim that retail electricity consumers would pay lower prices if wholesale public utility demand is disclosed to producers. Experimental markets studied here featured decentralized, privately negotiated contracts, typical of the wholesale electricity markets. Two conclusions emerge: (1) such markets generally converge to the competitive equilibrium and (2) forced disclosure works to the disadvantage of the disclosing side. Information disclosure would result in higher wholesale and thus higher retail electricity prices. (*JEL* L50, L94, D43)

> Ratepayers (i.e. California consumers) are aided when market participants have access to this level of [comprehensive utility planning data] information.... market participants (e.g. generators, energy service providers ...) are able to more effectively plan to meet the demands of ratepayers ... [to] develop the most efficient and cost-effective solution to meeting product demand.
>
> —Independent Energy Producers Association (2004, p. 4)

> The C[alifornia] E[nergy] C[omission] does not believe that California ratepayers will be harmed by a more transparent system. ... [it] believes all planning "facts" ought to be publicly available.
>
> —California Energy Commission's Comments on Confidentiality of Planning and Procurement Information (2004, p. 4, p. 7)

I. INTRODUCTION

The epigraphs, taken at face value, suggest that some commentators and policy makers believe that more information about the objectives of one side of a market made available to the other side of the market always improves the advantages of the market for all. One often sees the term *transparency* to describe a wholesome objective for regulated markets, referring to the disclosure of private information by market participants. The belief is about the fundamental principles of price discovery in markets—that the law of supply and demand operate neutrally and more efficiently if all information is public. The belief is reflected, for example, in the "sunshine" provisions of regulatory rule making in many states, as well as advice for financial markets from the International Monetary Fund (IMF 2001). The question posed by this article is whether the basic principle is correct or whether it is actually misleading about the consequences of disclosure policies.

Is more information always better? Motivated by a dispute over information disclosure proposed for California's regulated utilities,

ABBREVIATIONS

CE: Competitive Equilibrium
CEC: California Energy Commission
EFET: European Federation of Energy Traders
IMF: International Monetary Fund
ORA: Office of Ratepayer Advocates
TURN: The Utility Reform Network

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this article presents laboratory evidence that forcing only some parties to reveal private information when bargaining with others can result in inferior terms of trade for the revealing agents. In other words, the policy advocated by the California Energy Commission and similar policy bodies are based on unreliable (indeed incorrect) principles. Forcing the utilities to reveal confidential information regarding their energy demands to suppliers leads to higher negotiated prices and ultimately higher electricity prices for California consumers. The fallacy is that greater information in markets necessarily improves market performance from the point of view of all participants. Although no detailed theory that leads to this view is offered, the fallacy itself appears to rest on a flawed interpretation of the law of supply and demand along the following lines: *Efficient market equilibration is identified with the Nash equilibrium of an associated game theory model. For the game to equilibrate at an efficient Nash equilibrium, compete information about player utility functions must be necessary. Therefore, markets will work better if the utility functions are known to all.* Of course, every sentence of the argument can be challenged as incorrect.

Our experiment evaluates the market implications of greater information dissemination based on a static environment without endogenous entry or exit of suppliers. The quotes for California, as well as the position of the European Federation of Energy Traders (EFET), indicate that commentators believe that one benefit of greater transparency arises through more efficient entry decisions.[1] Although the experiment does not address these long-run considerations directly, it does provide some indirect evidence that entry could be attracted by greater information dissemination because the information leads to higher prices and profits of suppliers. But if this information release ultimately leads to lower costs to the buying utilities due to increased entry, utilities should not need additional regulations to force them to reveal their planning and procurement data.

Before presenting details of the experimental design, we find it useful to first present some background of the motivating controversy in the California electricity market that serves to characterize the manner in which the fallacy finds its way into important regulatory discussions. Overall, about one-third of the energy requirements of California's investor-owned electric utilities are met by utility-owned generation. The remaining two-thirds is bought from independent power producers, other out-of-state utilities, and federal power projects, such as the Bonneville Power Administration. Although some of this power is bought on centralized spot markets, much is procured through short-term (a year or less) and medium-term (one to five years) contracts that are negotiated with these suppliers.

The relationship between California's electric utilities and third-party intervenors such as The Utility Reform Network (TURN) and the Office of Ratepayer Advocates (ORA) has been strained over the years, particularly recently because of the well-publicized problems with energy pricing in the state. Starting in 2002, these intervenors, supported by market participants who sell power to California utilities, sought to require the utilities to publicly release substantial amounts of short- and long-term planning data to all market participants, including all product, price, forecast, and availability information contained in the utilities' procurement-related activities and applications. The intervenors and suppliers argued that this increased the market's transparency and would operate to the benefit of the electricity-consuming public. In the utilities' opinion, however, revealing such detailed data is tantamount to revealing all of their relevant demand information to potential suppliers prior to initiating negotiations.

Through a series of hearings, administrative law judge rulings, and negotiated settlements between the utilities and the intervenors during 2002 and 2003, the utilities either agreed to or were ordered to provide some additional information that had previously been considered confidential. Some planning and forecast data, as well as short-term procurement plans, for example, are now released but with a lag of several years. Other "market-sensitive" information was not to be released. Nevertheless, in a 3 April 2003 ruling, the judges and the Public Utilities Commission expressed intent to revisit their approach governing the treatment of confidential information, to improve "transparency in resource planning." The utilities

1. "Poor access to information raises a huge barrier to the entry of new market participants and is stifling the development of efficient, transparent wholesale markets" (EFET, 2003, p. 1).

strongly oppose releasing more information to the suppliers, and the suppliers strongly support receiving additional information from the utilities.[2]

It is well recognized in economics, of course, that as long as interests of bargainers are not sufficiently integrative (i.e., are not largely aligned with common interests) then providing private information to a bargaining opponent can make the revealing party no better off. This is true of most economics problems, such as bargaining over predominantly distributive attributes like price. For example, see Kennan and Wilson (1993) for an overview of bargaining models with private information. In regulatory disputes like this, however, theoretical arguments may not carry as much weight as clear, empirical evidence. To make a clear comparison between market outcomes with and without information disclosure using field data would require at least two different regulatory territories with different disclosure rules but similar market conditions (e.g., number of utilities, suppliers, power exchanges, procurement rules, weather conditions, etc.). Therefore, an accurate empirical evaluation of the information disclosure rules, holding other market conditions constant, is not feasible with field data. Empirical evidence, however, can be provided by a laboratory study.

Our laboratory experiment consists of 17 separate market sessions. We consider five separate environments, as explained in section III. All experiments are conducted in a new laboratory trading mechanism, described in section II, meant to capture many of the salient features of a market with multilateral, private pairwise negotiations, with no public transaction price information. This provides a reasonable approximation to the process of negotiating contracts for energy in California, where only the very short-term (day ahead and hour ahead) needs are priced in centralized markets.

Section IV presents the results. We find that negotiated prices tend to favor the information advantaged side of the market; for example, prices were higher when information about buyers' demand was revealed to sellers than when information about sellers' cost was revealed to buyers. This advantage occurs both in the adjustment phase as prices are moving toward equilibrium, as well as after equilibrium is reached. We also find that when sellers have some information about demand conditions and their own costs, prices are more sensitive to changes in demand conditions than changes in supply (cost) conditions. Prices do reach competitive equilibrium and nearly all gains from trade are extracted, regardless of the information disclosure rule, so our results do not identify a short-run efficiency cost of the information disclosure. Rather, the impact of information disclosure affects the *distribution* of surplus. If public utility regulators are concerned about benefiting rate payers, our results indicate that this goal is *not* achieved by revealing demand information to sellers.

To our knowledge, this is the first experimental study that examines this type of information asymmetry in multilateral negotiations. Several previous studies, however, have introduced information asymmetries to bilateral negotiations. Murnighan et al. (1999) formed bargaining pairs and then privately provided information about both bargainers' payoff schedules to one member of the pair. The pairs negotiated over multiple dimensions, including some with distributive characteristics (like price) as well as others with integrative, cooperative characteristics. In face-to-face bargaining, the information provided to one member of the pair allowed that member to negotiate more favorable outcomes compared to a control treatment with symmetrically, partially informed bargainers. But asymmetrically informed bargainers were not able to negotiate more favorable settlements when negotiations were conducted through computer chat windows. Roth and Murnighan (1982) also compare symmetric and asymmetric information bargains struck over computerized chats, but over lottery chips for prizes of known and unknown value. They find that the asymmetrically informed member of the bargaining pair is able to earn more than his counterpart.

Srivastava et al. (2000) also asymmetrically inform one member of the bargaining pair, who negotiate only over price. Both bargainers

2. The California Energy Commission (CEC 2004) has weighed in on the side of the suppliers. Notably, the CEC also recommends that suppliers be allowed to keep their fuel prices confidential for six months, because such information provides a basis for a competitive edge among competing suppliers. That is, they argue that suppliers should be able to keep their costs private while utilities should be required to reveal more quantitative details about demand.

know the item's cost, but only the buyer knows the value v she places on the item. The researchers do not employ a control treatment with symmetrically informed bargainers, and they employ alternating offer bargaining, control beliefs over the buyer's value v, and vary the degree of uncertainty over v as a main treatment variable. The authors employ this careful information structure because they evaluate specific predictions of the Grossman and Perry (1986) sequential equilibrium model of bargaining. Srivastava et al.'s results provide some reasonable support for key comparative static predictions, but they strongly reject the point predictions of the model.

A hint about the importance of one-sided information is found in the studies of one-sided auctions (Plott and Smith 1978; Smith 1964; Walker and Williams 1988). Although the evidence from these early studies about the role of information is tentative at best, the results reported here suggest that a review of one-sided processes might be in order. The early studies do not inform traders of others' values or costs, but they systematically vary the trading institution so that one side of the market is more active and may reveal endogenously more information about their true limit prices. In the offer auction, only sellers can make price offers, and buyers can only accept offers; in the bid auction, only buyers can make price offers, and sellers can only accept these bids. Smith (1964) conducted two sessions in each of these two institution treatments, and his results suggested that prices disadvantaged the side of the market that made offers. Based on a considerably larger sample of 14 experimental sessions, however, Walker and Williams find that in early trading periods there is not a systematic price difference across institution treatments. Plott and Smith cast further doubt on the theory that information asymmetries play a key role in these particular convergence processes by demonstrating that the dynamics are exactly the opposite in the one-sided posted price markets (in which posting favors the offering side) and oral auctions (in which tendering hurts the offering side). Thus, role of information in the convergence process has remained essentially unresolved.

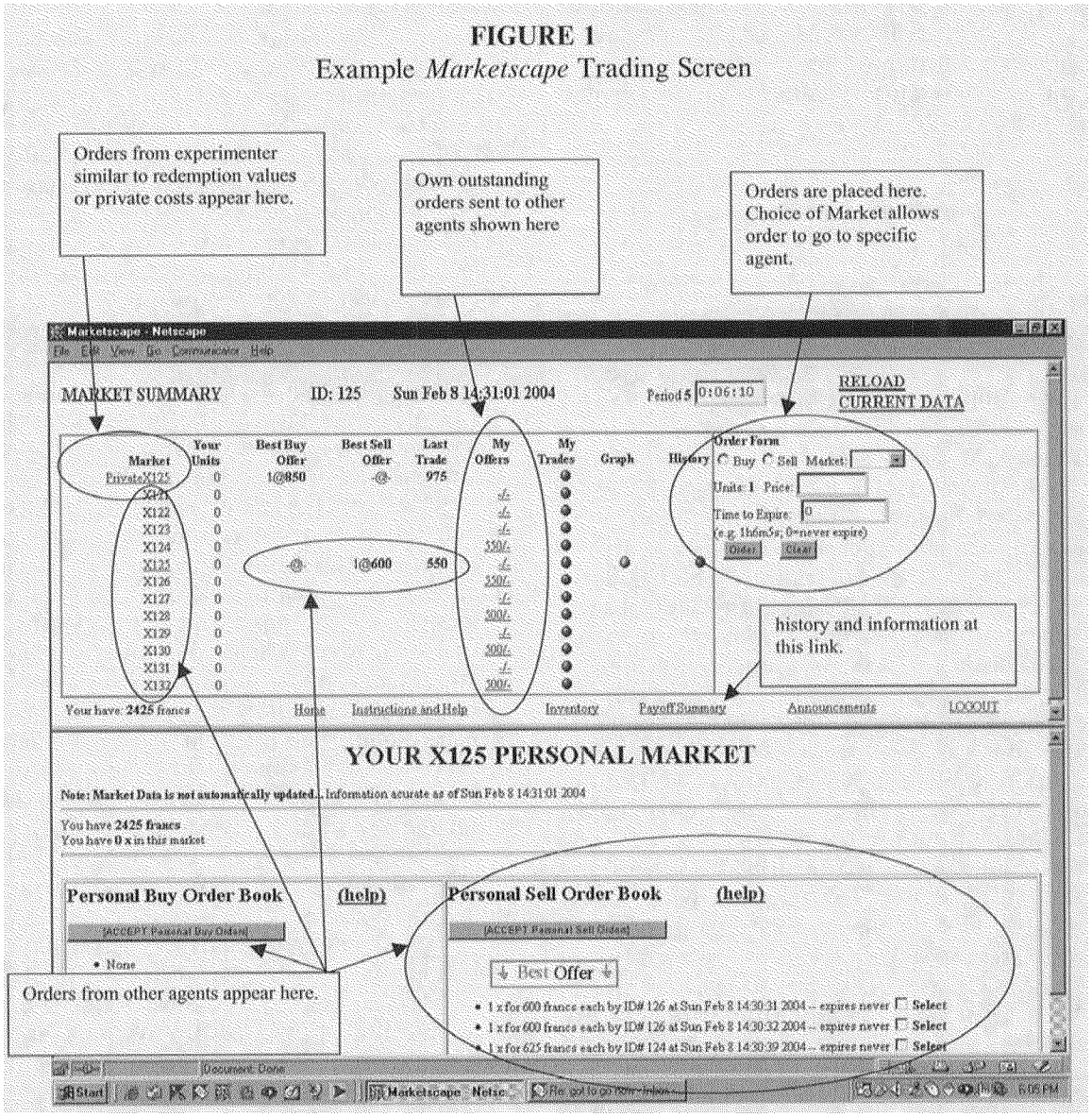
II. THE TRADING INSTITUTION

Our goal was to capture some salient features of the multilateral but private, pairwise negotiations that characterize the price discovery process in the wholesale market for electricity in California. We chose this market structure for the experiment over classical open outcry markets for three reasons. First, the fallacy just described is typically found in regulatory discussions in industries in which the industrial organization is more decentralized, with localized, private contracts much the same as the California wholesale electricity industry. Second, it is well known from the study of insiders in open outcry markets that the information held by insiders quickly disseminates throughout the market, and thus the effects of any asymmetries of information are typically small and hard to detect (Forsythe and Lundholm 1990; Plott and Sunder 1988). We wanted to study the effects in a context in which the principles at work can be more easily observed and studied. Third, in the California wholesale electricity markets, contract terms following a successful negotiation are private information, so this market does not feature any public transaction price information. Participants can negotiate simultaneously with different potential trading partners, and any agent is free to initiate or terminate negotiations with an agent on the other side of the market at any time. Clearly, therefore, the outside option for any negotiation is endogenous and is determined by trading terms available from alternative trading partners.

Most previous market experiments feature centralization of offers and/or transaction prices, so we required a new laboratory trading institution for these multilateral but private negotiations. A classic telephone market, such as the one used in Hong and Plott (1982) and in Grether and Plott (1984), could capture many of the key features of this type of negotiation process. The message space for telephone negotiations is rather rich, however, and can include intimidation, unverifiable claims, and persuasion. Therefore, we employed a computer-mediated negotiation process to increase control and limit the message space to the main variable of interest: price offers.

Figure 1 displays the main trading screen for the Marketscape program used to capture the key features of private, multilateral negotiations. Buyer 125, for example, receives price offers from sellers in his X125 Personal Market, and they are listed in ascending order in his personal sell order book shown at the lower right of the screen. He accepts the best

FIGURE 1
Example *Marketscape* Trading Screen



offer by clicking on a checkbox and then clicking the ACCEPT button. This buyer can also send price offers to specific sellers by filling out the order form shown on the upper right of this screen. He can revise or add additional offers and cancel any outstanding offers at any time. However, he must select only one "market" to send any offer to, and only one seller (i.e., that seller's personal market) can view those particular offers. Therefore, individual negotiations between any pair of potential traders are private, but traders can negotiate simultaneously with multiple potential trading partners. There is no public reporting of transaction prices, but traders can always access their own personal trade history.

Although this particular form of computer-mediated negotiation is not found in the field, where many different forms of market exist, it is relevant for the policy question that is the focus of our research. We are interested in the impact of information asymmetry on market outcomes, and this trading process carefully controls the information exchanged through bargaining. The negotiation also permits a rich exchange of price information, without allowing more difficult-to-control factors, such as bargaining personality and style, to influence results. Of course, the free-form nature of this bargaining, unlike other structured mechanisms, such as alternating offer bargaining, limits the applicability of

most theoretical models of the bargaining process. But it more accurately represents the opportunities and constraints of the negotiation process for energy contracts.

III. EXPERIMENTAL ENVIRONMENT AND DESIGN

In any market, the major underlying behavioral motivations of buyers and sellers can be captured in reduced form in demand and supply curves. Thus, to the extent that buyer information is disclosed to sellers, this is similar to disclosing information about the buyers' demand curve. Of course, there are various amounts of buyer information that could be disclosed, but each piece will reveal something about the demand curve. There is a considerable range of data that the Public Utilities Commission is considering compelling utilities to reveal, but the scope of information disclosure considered is tantamount to revealing all the information sufficient to define a buyer's demand curve. Therefore, the experimental design is based on this broad degree of information revelation. Although the Commission might ultimately choose a more limited degree of information revelation, the current experimental design should shed light on the direction of general effects that can be expected if more limited amounts of information are ultimately revealed.

As is the usual case in markets, each trader knew his or her own trading motivations—that is, sellers knew their own production costs, and buyers knew their own valuations for any units they purchase. For the sessions labeled as Sellers Informed, however, the sellers all received information (available at any time through a Payoff Summary link on their computer screen) about the minimum amounts that each buyer valued each unit that they might purchase. Although the instructions indicated that buyer values could exceed these minimum revealed levels, in fact they revealed the exact buyer values.[3] The fact that sellers were informed was common knowledge, but the content of this valuation information was only distributed to the sellers. Buyers only knew their own valuations and did not receive any information on seller costs or other buyers' values, as in the usual case. Asymmetric information was distributed analogously in sessions labeled as Buyers Informed; in these sessions, buyers all knew the maximum amount of each sellers' cost for each unit potentially supplied, but sellers only knew their own costs.

For the analysis we divide the 17 experimental sessions into 5 designs, with 2 to 5 replications for each design, as summarized in Table 1.

Design A has induced supply and demand arrays shown in Figure 2, or a similar variation with slightly different numbers of buyers and sellers. The distinguishing feature of this design is that it has a narrow range of competitive equilibrium (CE) prices, or in some cases a unique CE price.

Design B has supply and demand arrays shown in Figure 3. The distinguishing feature of this design is that it has a much wider range of CE prices. All prices in the interval [475, 600] are equilibrium prices in which the quantity supplied equals the quantity demanded.

Design C features a variety of upward demand shifts in different periods, and one supply shift in an early period. The demand shifts are displayed in the supply and demand arrays shown in Figure 4.

Design D features a shift in both demand and supply in period 7, which widens the CE price interval in either the downward or upward direction. Figure 5 displays the downward shift employed in two sessions; the other two sessions of this design used a mirror image upward shift in the equilibrium interval.

Design E first shifts the supply function (in period 6) and then shifts the demand function (in period 10), as shown in Figure 6.

Both designs A and B have substantial symmetries between the demand side and the supply side. We began with symmetric demand and supply conditions to control for any influences that demand and supply shapes might have on the convergence process and that might obscure the separate impact of information disclosure.[4] Thus, although these curves might not reflect the conditions of

3. By indicating that the buyer values could exceed the minimum revealed, the experimenter retained the ability to increase the buyer values without announcing that such increases were taking place. Had the instructions claimed that the values were exactly the redemption values, the experimenter would have lost the ability to study the unannounced parameter changes. Design C features unannounced demand shifts in some periods.

4. One of the early discoveries made using laboratory markets was that prices tend to converge from above (below) the CE when equilibrium surplus is larger for buyers (sellers) (Smith and Williams 1982).

TABLE 1
Experimental Sessions

Index	Location	Market Parameters	Disclosure Condition
040203	CIT	Design A	Buyer values known to sellers
040204	CIT	Design A	Buyer values known to sellers
040206	CIT	Design A	Seller cost known to buyers
040207	CIT	Design A	Seller cost known to buyers
040208	CIT	Design D, upward shift in equilibrium in period 7	Buyer values known to sellers
040213	Purdue	Design B set 2	Buyer values known to sellers
040214	CIT	Design B set 3	Buyer values known to sellers
040215a	Purdue	Design B	Seller cost known to buyers
040215b	CIT	Design B	Seller cost known to buyers
040215c	Purdue	Design B	Buyer values known to sellers
040216a	CIT	Design C set 4b schedule 3 demand shifts 3, 4, 5, 8	Buyer values known to sellers periods 5, 9
040216b	Purdue	Design C set 4b schedule 3 demand shifts 3,4,5,8	Buyer values known to sellers periods 5, 9
040229a	Purdue	Design D, downward shift in equilibrium in period 7	Buyer values known to sellers
040229b	CIT	Design D, downward shift in equilibrium in period 7	Buyer values known to sellers
040301	Purdue	Design D, upward shift in equilibrium in period 7	Buyer values known to sellers
040308	Purdue	Design E, supply shift per. 6, demand shift period 10	Buyer values known to sellers
040309	Purdue	Design E, supply shift per. 6, demand shift period 10	Buyer values known to sellers

the California electricity market, they do allow us to study how the proposed information revelations will influence the functioning of the fundamental laws of supply and demand.

Design C serves two functions. First, it is a robustness check on the overall patterns of results derived from the other designs. The design involves a series of demand and supply

FIGURE 2
Supply and Demand for Design A

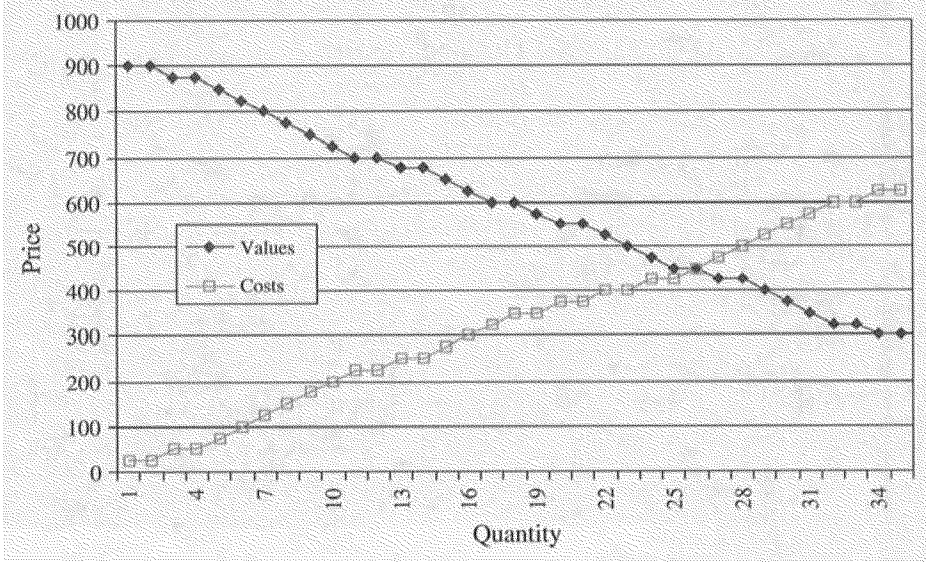
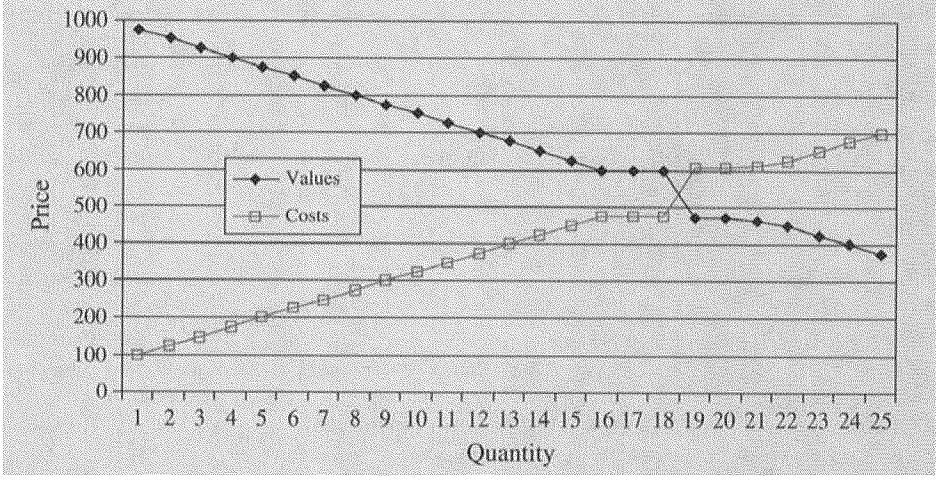


FIGURE 3
Supply and Demand for Design B



shifts rather than the single demand or supply shifts of the other design. It also incorporates information revelation about demands and supplies that are not coincident with parameter changes, so information shifts that might be contained in market activity alone is not confounded with the information provided through regulations to one side of the market or the other. Second, the design is especially relevant for exploring the issues of the California electricity market. In this design, the supply curves used in the experimental markets have important qualitative features that broadly correspond to the features found in electricity markets. Supply is "flat" over a broad range and then turns upward sharply as capacity limits are approached. Demand, on the other hand, is very inelastic and grows from one period to the next. These are important similarities with the situation that can be expected to evolve in California as demand for electricity grows due to growing population, short-run supply is inelastic, and the elasticity of long-run supply is highly uncertain due the financial stress in the generation development market. Thus the design tests for the possibility that the particular parameters present in the regulatory dispute that partially motivates the study do not have implications for the principles that are at work.

Designs D and E, like designs A and B, are not intended to be consistent with specific underlying properties of the California

FIGURE 4
Supply and Demand for Design C

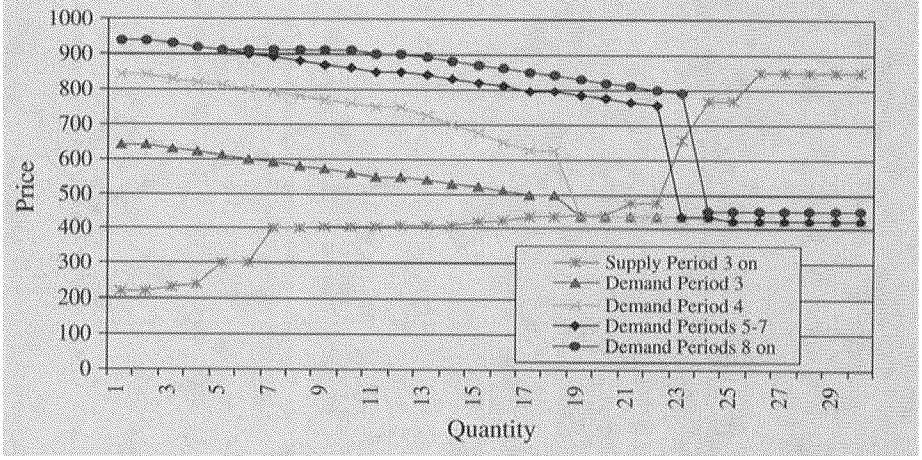
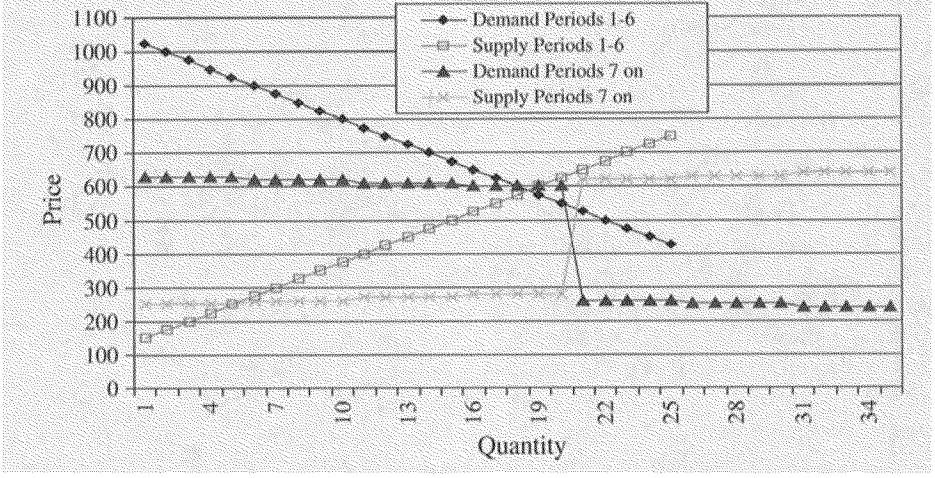


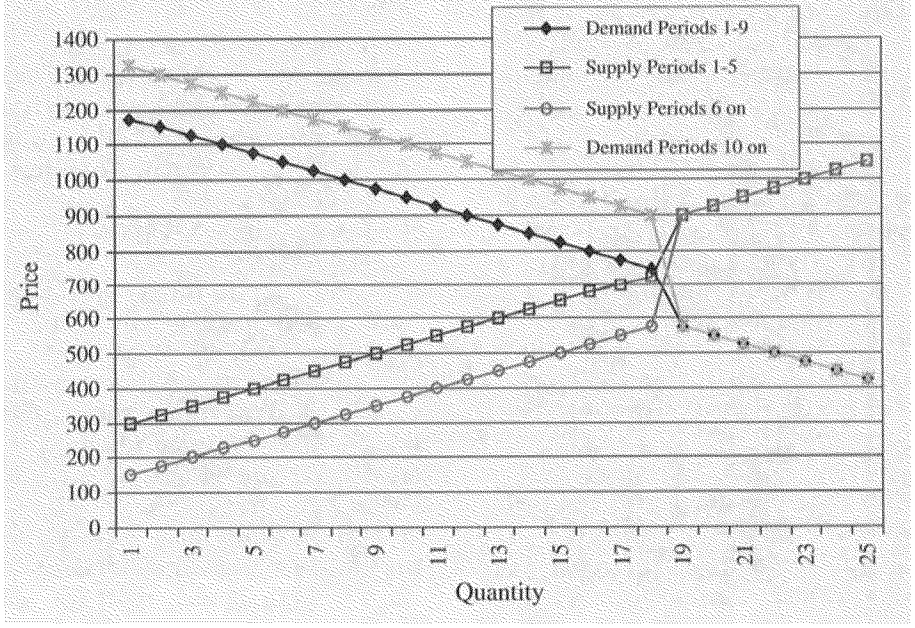
FIGURE 5
Supply and Demand for Design D



electricity market. Instead, we chose these parameters to investigate further how the information advantage enjoyed by one side of the market affects adjustment to new equilibrium conditions. The designs also provide insight into how information is disseminated through bargaining in this multilateral negotiation institution.

The other variable that we systematically changed from one experimental session to another was whether the supply side or the demand side of the market was asymmetrically blessed with knowledge about the other side. In 13 of the 17 sessions, the sellers were given detailed information about the minimum value that units were worth to buyers. For shorthand we refer to these as Sellers Informed sessions. In the two design C sessions, the sellers received this information in period 5, and it was not updated until period 9. In the other sessions, the sellers received this information before the first period, and they were continually

FIGURE 6
Supply and Demand for Design E



kept up to date about changing information about the buyers.

Although it is not the current issue in California, for an understanding of the symmetry in the other four sessions the buyers were given detailed information about the maximum cost that sellers incurred to produce units. We refer to these as Buyers Informed sessions, which can be used as controls to identify the effect of information disclosures.

As highlighted in Table 1, about one-half of the sessions were conducted at Caltech and one half at Purdue University. We employ site dummy variables in some of the analyses reported below, but we did not identify any statistically significant differences in outcomes across sites. All sessions used the identical Marketscape trading program, running on a server located in the Caltech lab. All subjects underwent substantial Marketscape training prior to participating in these sessions, which included practice negotiation and trading with robot trading partners. This training lasted more than an hour, and it occurred either immediately before the session or some days or weeks prior. The specific instructions for the sessions reported here, available online at www.krannert.purdue.edu/faculty/cason/papers/fallacy_inst.pdf, were distributed to subjects and read orally by the experimenter while displayed on an overhead projector. Period 1 of each session (not reported) was a practice period that did not count in the subjects' final cash earnings. The exchange rate of experimental currency to dollars varied across design parameters, calibrated to provide average earnings than ranged from about $25 to $40 for the sessions that lasted between 2 and 2.5 hours.

IV. RESULTS

Our first result confirms that the general market convergence properties observed in previous auction-type and exchange-type experimental markets also operates in these bilateral-negotiation markets.[5]

5. All of the results exclude the small number of transactions that were clearly typographical errors because they differed from other transaction prices by at least one order of magnitude; for example, a price of 57 when all recent transaction prices ranged between 575 and 600. This excludes 48 of the 3351 transactions in the 17 sessions (1.4%). Although these excluded transactions could influence subsequent transactions in the same session, our lack of public price information (due to the private bilateral trading institution employed) considerably limits their impact.

TABLE 2
Deviations of Median Transaction Prices from Competitive Equilibrium

Session Index	Period 2 Median-CE (1)	Period 5 Median-CE (2)	Difference in Absolute Deviations (Period 2 – Period 5) (3)	Period 5 Efficiency (4)
Design A				
040203	50	0	50	97.1%
040204	49	50	−1	98.0%
040206	0	0	0	98.7%
040207	−25	−15	10	96.3%
Design B				
040213	0	0	0	100%
040214	0	0	0	98.7%
040215c	0	0	0	98.3%
040215a	0	0	0	84.8%
040215b	0	0	0	98.4%
Design D				
040208	−25	0	25	99.2%
040301	0	0	0	99.4%
040229a	−25	0	25	98.8%
040229b	0	0	0	99.7%
Design E				
040308	0	0	0	86.4%*
040309	−25	−22.5	2.5	95.7%

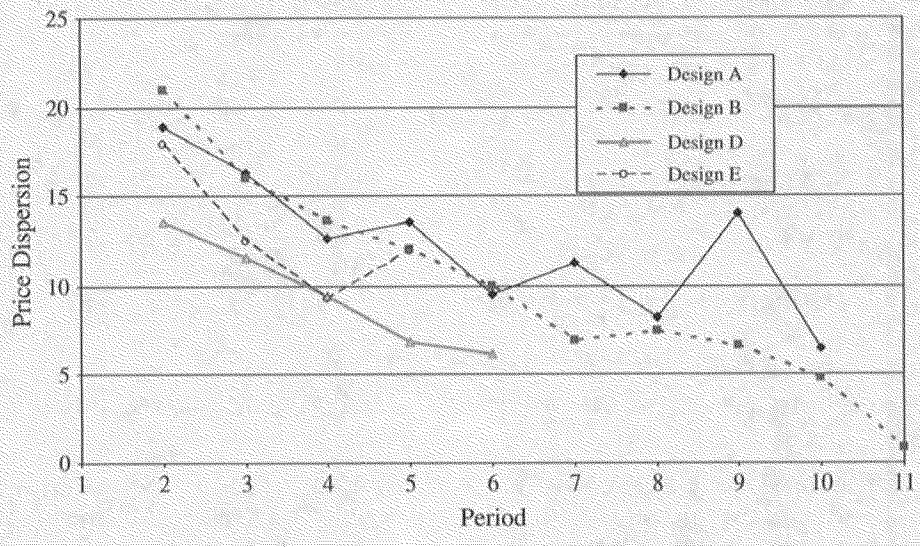
*Low efficiency in period 5 of this session was due to an error made by a buyer who failed to redeem a purchased unit before time expired. Efficiency would have been 97.2% if this buyer had redeemed this single unit.

Result 1

Prices in the bilateral negotiation markets converge to a competitive equilibrium under stable supply-demand conditions: (1) average prices approach the competitive equilibrium level, (2) the variance of prices across contracts declines over time, and (3) trading efficiency approaches 100%.

Support. Despite the decentralized nature of trading and price information, prices move toward and usually reach the CE price range in the sessions reported here. Early prices are volatile and many are significantly lower than the equilibrium price range, but eventually most prices are within the equilibrium range. Table 2 summarizes the deviations of the median prices from the CE for all sessions that began with at least five periods of stable supply and demand conditions (that is, all designs

FIGURE 7
Price Dispersion, by Treatment, Prior to First Supply or Demand Shift
(Average Standard Error of the Mean Transaction Price)



except design C). Column 1 displays the deviations of the median transaction price in the first paying period (period 2), and column 2 displays the deviations in period 5. All median prices lie within the wide equilibrium price interval in design B, but period 2 median prices frequently deviate from the equilibrium in the other designs. The median absolute deviations decline significantly from period 2 to period 5, based on the 15 statistically independent pairwise differences shown in column 3 (nonparametric Wilcoxon signed rank test p-value = 0.031, one-tailed).

Price movements toward the CE interval are clearly evident in Table 2. However, by convergence in these types of markets, we mean more than simply a tendency for average or median prices to approach the equilibrium level. In addition to average prices that approach equilibrium, convergence also requires price dispersion to decline toward zero. That is, we expect the "law of one price" to prevail in markets that have converged. Figure 7 presents evidence on this dimension of convergence. The figure displays the standard errors of the mean associated with the average transaction prices up until the first shift in supply and demand, averaged across all sessions within each treatment (except design C). In most sessions the price dispersion, as shown on the vertical axis, is high during the early periods. As the periods progress the dispersion falls dramatically in the sense that early dispersion is on the order of two to five times that of later periods. In other words, competitive pressures are bringing the prices together, even though price information is never publicly displayed and traders can only infer prices through their bilateral negotiations with other traders. Another convergence criteria often used when analyzing laboratory markets is increasing trading efficiency. Trading efficiency is defined as the percentage of maximum (CE) trading surplus realized in the market. As shown in column 4 of Table 2, our markets were highly efficient, with period 5 efficiencies typically in the 95–100% range.

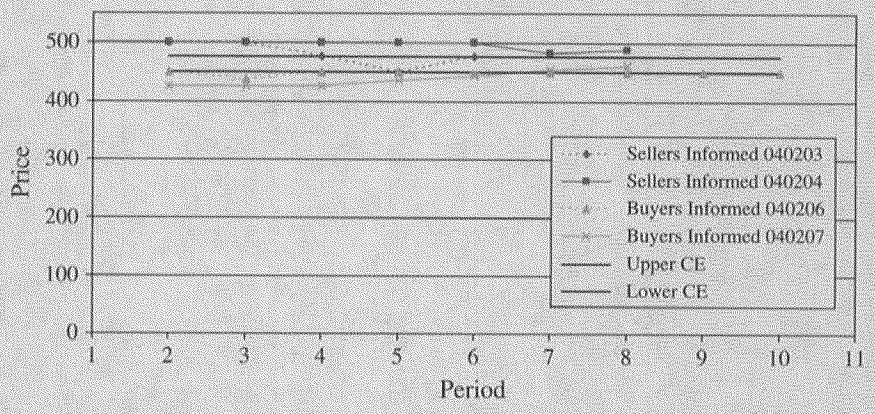
The next result presents the most important conclusion from the experiment: the relationship between pricing outcomes and the asymmetric distribution of information.

Result 2

Information confers a pricing advantage, particularly during the equilibration phase of market interactions when prices are adjusting toward equilibrium.

Support. Consider Figures 8 and 9, which show the median transaction prices for each period and each session in designs A and B. The Buyers Informed sessions are identified with the triangle and the cross in both figures.

FIGURE 8
Median Transaction Prices by Session, Design A

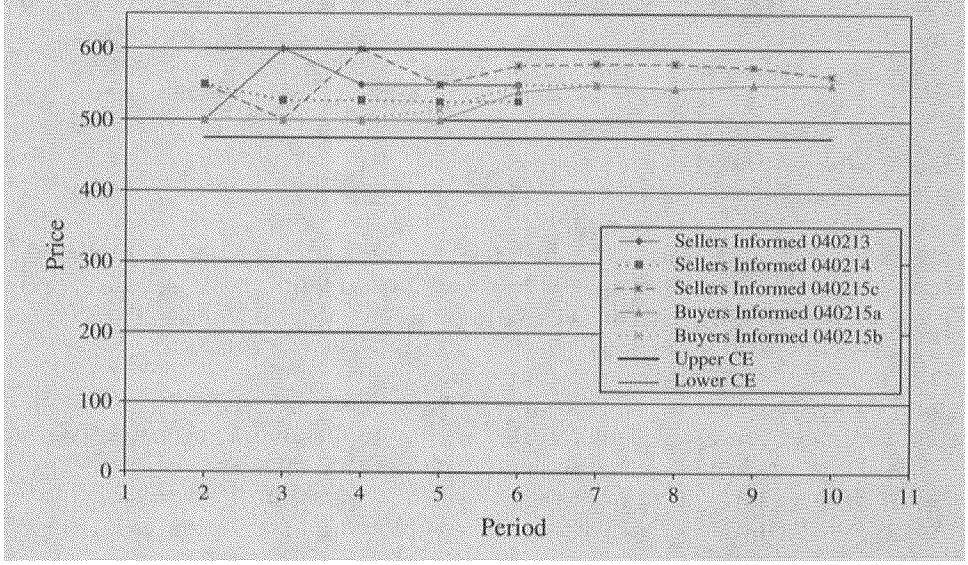


Note: Upper CE of 475 only applies to session 040207. Other sessions have a unique CE of 450 (shown as Lower CE).

In design A (Figure 8), for all periods except one the maximum median price in any Buyers Informed session is lower than the minimum median price in any Sellers Informed session. Pooling the data in design A across sessions and periods, we find that prices are on average 7% higher when sellers are informed (484) than when buyers are informed (453). Likewise, in design B (Figure 9), median transaction prices are also usually higher in the Sellers Informed sessions than in the Buyers Informed sessions. Pooling across sessions and periods in design B, prices are on average 8% higher when sellers are informed (555) than when buyers are informed (516).

Prior to the midsession shift, design D has the same supply and demand configuration as design A. This design therefore provides four additional sessions (all with sellers informed) to add to the nine design A and B sessions shown in Figures 8 and 9 for a statistical comparison of prices in the two information treatments. For this comparison we use the period 5 (median price – competitive equilibrium price midpoint) deviations for each session in designs A, B, and D to provide comparable

FIGURE 9
Median Transaction Prices by Session, Design B



preshift prices in all sessions. These deviations are positive in only one of the four Buyers Informed sessions, but are positive in five of the nine Sellers Informed sessions. A nonparametric Mann-Whitney test, based on the 13 statistically independent session observations, marginally rejects the hypothesis that these period 5 deviations are not different in the two treatments in favor of the one-sided alternative that prices are higher when sellers have some information about buyer values (p-value = 0.087, $N_A = 9$, $N_B = 4$). We draw a similar conclusion from a simple cross-sectional ordinary least squares regression that employs one period 5 price deviation observation per session, which allows us to control for design differences with a design B dummy variable and experimental site differences with an (insignificant) Purdue dummy variable. The point estimate indicates a 24 franc higher median price when sellers are informed (SE 13.3, one-tailed p-value = 0.053).[6]

Result 3

The pricing advantage provided by the asymmetric disclosure of information often declines as prices approach the equilibrium, but the pricing advantage can persist when a wide range of equilibrium prices exists.

Support. Figures 8 and 9 indicate that the price differences between Buyers Informed and Sellers Informed sessions are generally more pronounced in the early periods than in the later periods. For example, consider the size of the percentage price difference across these two opposite cases for the first three paying periods (periods 2 through 4) compared to the next three paying periods (periods 5 through 7). In design A (i.e., narrow range of equilibrium prices), the differences in prices across treatments are modestly greater in periods 2–4 (averaging 8.1%) compared to periods 5–7 (averaging 6.7%). But in design B (i.e., wider range of equilibrium prices), in periods 2–4 the prices are on average 10.1% higher when sellers are informed (544) than when buyers are informed (494), whereas in periods 5–7 the prices on average are only 5.3% higher when sellers are informed (558) than when buyers are informed (530).

Nevertheless, an independent examination of the longer design B sessions 040215a and 040215c indicate that the pricing advantage can persist even after prices have converged to equilibrium, as long as that equilibrium contains a relatively wide range of prices. In the late periods 8–10, the average transaction price in the Sellers Informed session 040215c is 9% higher (581) than in the Buyers Informed session 040215a (532). Note that both of these averages are, however, still within the range of equilibrium prices [475, 600].

Result 4

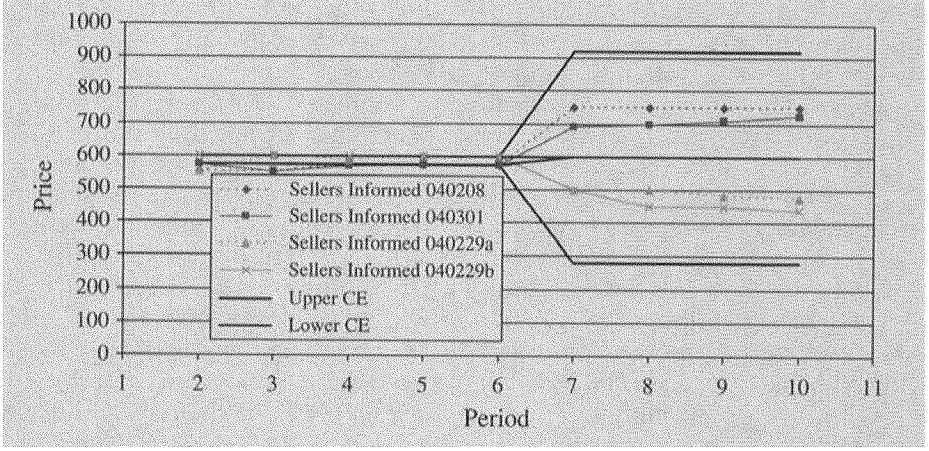
The response of realized transaction prices to changes in equilibrium market conditions depends on the information available to traders about the new supply and demand situation. (1) Design D sessions show that when both types of traders can recognize an underlying shift, prices adjust toward the midpoint of the new equilibrium price range; (2) design E sessions show that prices do not adjust to reflect cost reductions when only sellers are aware of the underlying change in market conditions.

Support. Figures 10 and 11 present median transaction prices for the 6 sessions in Designs D and E. Sellers were informed of the minimum buyer values in all six of these sessions. In design D a narrow market equilibrium price range in early periods is followed by a large demand and supply shift in period 7 to a condition that results in both inelastic demand and inelastic supply and a wide range of equilibrium prices. After the shift, however, prices that were very near the old equilibrium price remain as possible new equilibrium prices. Thus, because we observe prices in the equilibrium range—as documented throughout these results—a possibility exists that prices would move very little or by a substantial amount (up to 50%) after the shift is introduced in period 7.

Despite the possibility that prices need not adjust by much to reach a new equilibrium level, however, prices in fact adjust quickly

6. We obtain similar results if we replace the median price dependent variable with a variable representing seller profits. In particular, define Relative Seller Profit as the aggregate seller earnings divided by the earnings that sellers would receive if all efficient trades occurred and took place at the CE price midpoint. This normalization adjusts seller profits for the differing supply and demand conditions across sessions. A regression of period 5 Relative Seller Profit on the disclosure rule, design and site dummy variables indicates a point estimate of 13% higher Relative Seller Profit when sellers rather than buyers are informed (SE 8.6, one-tailed p-value = 0.079).

FIGURE 10
Median Transaction Prices by Session, Design D



and significantly to near the middle of the new equilibrium price range. What is perhaps more surprising is that the shift is similar in speed and size when the equilibrium shifts down compared to when it shifts up, even though in all four sessions sellers have some information about the buyers' values and buyers never know the sellers' costs. Buyers can infer that market conditions are changing in period 7, though, because of their own dramatically revised resale values. This may have motivated them to negotiate aggressively with sellers following the shift, leading to substantial downward price pressure when the equilibrium price range shifted all the way down to 280 francs. This conjecture motivated the more subtle supply and demand shifts introduced in design E.

In design E, sellers' costs shifted down in period 6, resulting in a downward widening of the competitive equilibrium price interval. Buyers' values remained unchanged, and they received no information about sellers' costs, so they should have been unaware of the supply shift. Although prices could have fallen by as much as 20% following this shift and still remain in the equilibrium range, Figure 11 shows that median prices hardly adjust (remaining mostly around 700 francs) in both sessions. By contrast, median prices increase immediately in both sessions when a demand shift that is known to the informed sellers is introduced in period 10, and prices continue to rise thereafter. This suggests that when sellers are asymmetrically informed about buyer values,

FIGURE 11
Median Transaction Prices by Session, Design E

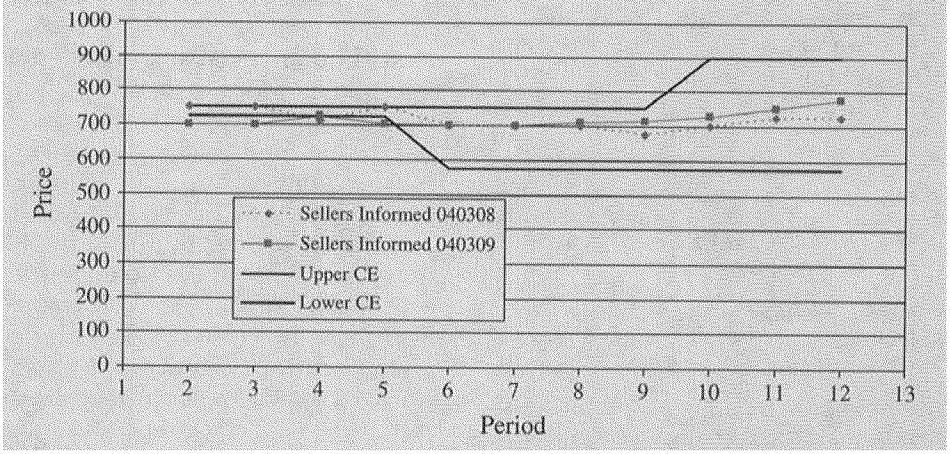
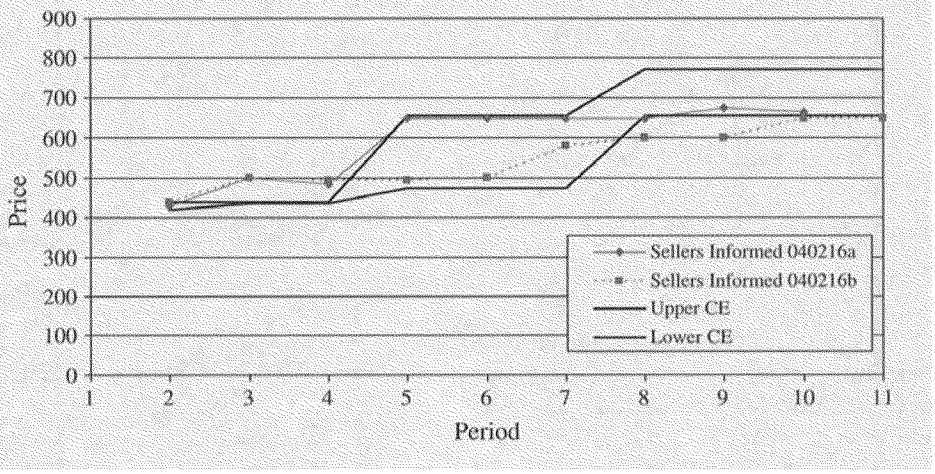


FIGURE 12
Median Transaction Prices by Session, Design C



the transaction prices are more sensitive to demand shifts than they are to supply shifts.

Result 5

All results stated previously survive the robustness tests of series C.

Support. Series C consists of two sessions operating under the same parameters. The time series of median transaction prices are displayed in Figure 12. In these sessions the first two periods have stationary, symmetric demand and supply with consumer surplus equal to producer surplus. Prices converge to near the competitive equilibrium by period 2, consistent with Result 1. In period 3 a demand and supply shift takes place that is not announced to any traders. As can be seen prices move up, possibly reflecting the asymmetric rents, with consumer surplus greater than producer surplus and the market in the early part of adjustment feeling the changes with a consequent shift upward in price. In period 4 another upward demand shift takes place that exacerbates this rent asymmetry but does not affect the equilibrium price range. The information of the shift is not given to the sellers, and there is no tendency for prices to move upward, consistent with Result 2 that the information disclosure is a key feature that conveys advantages to the information receiving side. In period 5 another upward shift in demand takes place, this time widening the equilibrium price range. At the beginning of the period, some information about the demand is disclosed to the sellers, and consistent with Result 2 the prices immediately jump in one market and move sharply upward in the other market two periods later. In period 8 another upward demand shift takes place without information disclosure. This shift in demand has no effect on market prices in session 040216a and a small effect in session 040216b, but because the 040216b market had an upward drift in prices anyway, attribution to the demand shift is problematic. In period 9 when some information about demand is disclosed and sellers learn of the shift, the market prices immediately respond upward in session 040216a, and median prices respond upward with a one-period lag in session 040216b. The phenomena identified in all of the previous results are also found in this more complex setting thereby demonstrating that the results are robust to such environmental changes.

V. CONCLUSION

This research was motivated by a proposition about a basic principle that governs market behavior that is widely asserted in regulatory settings. The proposition is that disclosure of plans and market strategies by one side of a market to the other side will be helpful to market performance and beneficial to all of the market participants. The proposition reflects a belief about how the laws of supply and demand work and the manner in

which information works to facilitate their operation. The results of the experiments demonstrate that such a proposition is not correct. In the context of market transactions, such disclosures damage the disclosing party. The laws of supply and demand follow a completely different set of principles from those on which the proposition rests.

In the case of the California wholesale electricity market, the proposition holds that electricity prices will be lower to the consuming public if the major electricity demanders would make their demand function known to suppliers prior to contracting. The experiments demonstrate that the presumption should be that opposite would be the case. Disclosure of the demand information would result in a tendency for prices to increase, especially in the cases in which demand and supply are both inelastic and in which demand is changing, as is expected to be the case in California in the future.

Is it the case that the California wholesale electricity market is special in the sense that the law of supply and demand would work completely differently than the way that it is observed at work in the laboratory? Currently neither general theory nor institutional fact has been advanced to suggest anything other than a presumption that the basic principles operate in California in the same way that they are assumed to work in general. Indeed, advocates of the forcing of information revelation have produced no theory at all and instead have advanced the proposition as if it is completely general, applicable to all markets. Thus, the experiments produced here place a burden on the advocates to produce a theory of sufficient generality to support the proposition that they advance. When that is done, additional tests can be performed to test its reliability.

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AFFIDAVIT

I am an employee of the respondent corporation herein, and am authorized to make this verification on its behalf. The matters stated in the foregoing **SAN DIEGO GAS & ELECTRIC COMPANY (U 902 E) COMMENTS ON PRELIMINARY STAFF PROPOSAL REGARDING CONFIDENTIALITY RULES** are true of my own knowledge, except as to matters which are therein stated on information and belief, and as to those matters I believe them to be true.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct to the best of my knowledge.

Executed this 5th day of August, 2013, at San Diego, California

/s/ Hillary Hebert
Hillary Hebert
Partnerships and Programs Manager
Origination and Portfolio Design Department