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**STATE COMMISSION REGULATION OF  
SELF-DEALING POWER TRANSACTIONS**

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## EXECUTIVE SUMMARY

In delivering power to customers, a regulated electric utility has diverse resource options. Among the resource options, utility-owned generation and procuring power from an affiliate may be defined as self-dealing transactions. Although self-dealing is inherently neither beneficial nor harmful, current resource acquisition practices may offer opportunities and incentives to a utility to engage in inefficient self-dealing. Self-dealing may be viewed as abusive if it is both inefficient and deliberate. One form of abusive self-dealing, namely, transfer pricing, is a well-known problem in regulatory economics. Transfer pricing occurs if a utility affiliate is able to charge above-market prices for its goods and services knowing that these increased prices will be passed through to ratepayers. The emerging competitive environment in the electricity industry may both expand opportunities and impose restraints on abusive self-dealing.

Incentives and opportunities for self-dealing abuse exist if the following conditions hold: (1) the utility or parent company gains economically from self-dealing, (2) retail customers have limited access to alternative sources of electricity, (3) the utility is legally and technically able to engage in self-dealing, and (4) regulators have limited access to information and limited ability to detect self-dealing abuse. These conditions generally hold for regulated utilities in the U.S.

Opportunities for self-dealing abuse exist at different phases of the resource planning and resource acquisition process, including load forecasting, resource needs determination, resource selection, competitive bidding or direct solicitation, and contracting. In each of these phases, the utility has opportunities to strategically use the input data, analytical tools, resource evaluation mechanisms, and contracting options to favor either utility-owned generation or power procurement from an affiliate.

Regulatory agencies have heard a number of cases involving alleged self-dealing abuse.<sup>1</sup> It is quite possible that not every occurrence of self-dealing abuse has been detected by regulatory scrutiny, given the limited access of regulators to utility information. In consideration of this informational asymmetry, this report focuses on preventing, rather than detecting, self-dealing abuse.

In spite of its potential for abuse, self-dealing should not be viewed as inherently harmful. It is important to recognize both merits and demerits of self-dealing. The merits include: (1) the possibility that the utility may be the lowest-cost provider, (2) a utility affiliate may be the lowest-cost provider, (3) there may be economies of scope, coordination, and learning when the utility or an affiliate is the chosen provider, and (4) there may be advantages in terms of access to transmission and interconnection to the transmission grid when the utility or an affiliate is the chosen provider. The demerits include: (1) the utility may not be the lowest-cost provider, (2) a utility affiliate may not be the lowest-cost provider, (3) there may be cross-subsidization of services or customer segments, and (4) self-dealing may constitute unfair treatment of the utility's competition. The challenge for regulators is to protect retail customers from the potential harm of abusive self-dealing and help utilize potential benefits to the customers' advantage.

In meeting this challenge, regulators need to be aware of the implications of the new competitive environment for self-dealing. The growing competition in the wholesale market may lead to the growth of energy-related subsidiaries within a parent utility holding company. A parent holding company may find it profitable to set up subsidiaries and for such subsidiaries to sell power to affiliated utilities. Further, emerging trends in the electricity industry and the potential future restructuring of the industry may provide regulators with tools to restrain self-dealing abuse. More particularly, development of a wholesale spot market for electricity, the possible formation of "Poolcos," which are envisioned by their proponents as utility-independent

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<sup>1</sup> Some of these cases are discussed in Chapter 4.

entities acting as a go-between for a region's power sellers and users, increased competition in the retail generation market, and vertical disintegration of utilities should help regulators develop market-based benchmarks for evaluating utility resource acquisition decisions, as well as increase competitive pressures. These potential outcomes of the emerging competitive environment are likely to make self-dealing abuse both less profitable and easier to detect than in the past.

Regulators have a number of options to address self-dealing (Tables ES-1 through ES-3). Besides exercising their regulatory authority over utility diversification and affiliate transactions, regulators can explore a number of market-oriented and incentive-based regulatory options. These options include introducing competitive bidding procedures and reforming existing bidding procedures, establishing caps on purchased power, severing retail prices from utility costs, basing cost recovery and revenues on performance indices, and stimulating retail competition.

Most observers would agree that the emerging competitive environment in the electricity industry warrants a general reorientation of the regulatory focus to better promote economic efficiency. Inefficient or abusive self-dealing constitutes one particular form of utility inefficiency. Our examination of self-dealing indicates that the same regulatory approaches that promote economic efficiency are also likely to restrain abusive self-dealing. Such approaches embody greater reliance on market forces and less reliance on regulatory oversight.

TABLE ES-1

REGULATORY OPTIONS TO MITIGATE  
SELF-DEALING ABUSE

- Exercise regulatory authority over utility diversification and utility-affiliate transactions
- Introduce and/or reform competitive bidding procedures
- Establish cap on the price of purchased power
- Sever retail prices from cost of service
- Base cost recovery and revenues on performance indices
- Stimulate retail competition

TABLE ES-2

USING REGULATORY AUTHORITY OVER  
UTILITY DIVERSIFICATION AND AFFILIATE TRANSACTIONS  
TO MITIGATE SELF-DEALING ABUSE

- Require structural separation
- Require divestiture
- Regulate utility affiliate relationships and transactions
- Prohibit affiliate transactions
- Selectively scrutinize affiliate transactions

**TABLE ES-3**  
**USING COMPETITIVE BIDDING  
TO MITIGATE SELF-DEALING ABUSE**

- Use a binding avoided cost
- Make the resource planning process transparent
- Review/preapprove Request for Proposals
- Allow third-party examination of bid evaluations
- Approve only fixed-price contracts
- Favor cost-sharing contracts with low-sharing fractions
- Discourage/prohibit contracts with take-or-pay clauses
- Discourage/prohibit contracts with cost-plus escalation clauses

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## FOREWORD

Self-dealing by electric utilities has always been a phenomenon with potential for harm and arguably, some good. Vertical integration, a common form of the self-dealing arrangement, was long thought to have the chance for scale and scope economies which, if reflected in prices to customers, could be beneficial. Where self-dealing is of the abusive variety characterized by artificially high prices, accounting and intracorporate mischief, anticompetitive behavior through deterring entry, and preferential supply acquisition, the ratepaying public and the industry structure are hurt.

This study sets out the potential problems with self-dealing by electric utilities in the new environment of increased reliance on markets and suggests how regulators might best respond.

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## CHAPTER 1

### INTRODUCTION

In delivering power to customers, a regulated electric utility has diverse resource options. The utility can build its own capacity and generate its own power. The utility also can procure power from an outside supplier, which may or may not be an affiliate of the utility. Among resource options mentioned, utility-owned generation and power procurement from an affiliate may be defined as self-dealing transactions.<sup>1</sup> The self-dealing transaction, because of its potential for harm to ratepayers, has traditionally been a source of considerable regulatory concern. Self-dealing may be viewed as abusive when it is both inefficient and deliberate. One form of abusive self-dealing, namely, transfer pricing, is well known in regulatory economics. Transfer pricing occurs when a utility affiliate charges above-market prices for its product knowing that these increased prices will be passed through to ratepayers. Although state public utility commissions (PUCs) vary in terms of authority, jurisdiction, policies and procedures used to regulate self-dealing transactions, such transactions generally receive close regulatory scrutiny. The emerging competition in the electric utility generation sector has implications for self-dealing transactions that require reexamination of pertinent regulatory policies. Such reexamination should help regulators develop policies to best serve the interests of ratepayers. This report examines current regulatory policies regarding self-dealing power transactions, and develops and evaluates regulatory approaches to effectively address self-dealing issues.

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<sup>1</sup> In this report, use of utility-owned capacity and utility-owned generation to deliver power are considered forms of self-dealing.

## The Occasion

### **Background**

One form of self-dealing, namely, utility-owned generation, was a common mode of resource selection for most regulated utilities until the early 1970s. Until that time, given the vertically integrated structure of the regulated utility with monopoly franchise rights, limited access to nonutility sources of power and an electric power industry characterized by declining costs and prices, utility-owned generation was considered the norm and did not warrant any significant regulatory scrutiny.

This state of affairs, however, began to change as a result of the confluence of events known as the “energy crisis” in the early 1970s. Costs of electricity production and customer rates began to rise rapidly, safety and environmental concerns related to power plants emerged as significant public policy issues, and energy security and energy conservation became important national priorities. These developments engendered changes both at the state and federal levels. At the state levels, public utility commissions heightened the level of regulatory oversight. In particular, a number of nuclear plant construction projects invited considerable regulatory scrutiny because of escalating costs and public safety concerns. At the federal level, the U.S. Congress enacted the Public Utilities Regulatory Policies Act (PURPA) in 1978. PURPA required the utility to purchase power from cogenerators (COGENs), small power producers (SPPs) and other qualifying facilities (QFs) if the cost of doing so was less than the avoided cost of the utility. In the decade and half that followed, the electric utility industry went through a series of changes that were significantly affected by PURPA, as well as other developments in the industry.

Beginning in the early 1980s, utilities increasingly started purchasing power from QFs and other nonutility generators (NUGs) mostly in response to PURPA requirements but also in response to increased regulatory oversight of a utility's resource selection process. Regulators started encouraging or requiring utilities to

incorporate the "least cost planning" (LCP) or "integrated resource planning" (IRP) approach to the utility resource selection process. Such an approach typically had both a cost-minimization and an "all source" orientation. The selected mix of resources was intended to achieve the lowest cost. The mix also needed to be developed from a comprehensive menu of sources that varied with respect to primary resource or fuel, technology, and ownership. A utility IRP could include, for example, fossil-fired plants, renewable-based plants and end-use energy efficiency options, to be supplied by the utility itself, QFs (or PURPA machines as they were often referred to), independent power producers (IPPs) and other NUGs. PURPA requirements and IRP processes either voluntarily adopted by utilities or mandated by PUCs increasingly led utilities to purchase power and other energy services from nonutility sources. To promote efficiency in the resource selection process, many PUCs required utilities to adopt, and some utilities voluntarily adopted, a competitive bidding process for power procurement and other energy services. These developments signaled a departure from the traditional resource selection process in which the utility almost exclusively built its own facilities and supplied its own power.

### **Overview of Regulatory Issues**

The new developments introduced competition and conflicts between different resources and resource suppliers, and sharpened the distinction between self-dealing transactions and other forms of resource selection. For example, it became an important regulatory issue whether the ratepayer would be best served, in terms of cost and reliability, if the utility built its own facility and supplied its own power, purchased power from an affiliate of the utility or purchased power from a NUG unaffiliated with the utility. It is obvious that a potential for abuse exists if the utility chooses to generate its own power or purchase power from an affiliate because more economical sources of power may be foregone. It is difficult for regulators, given the limited access to utility information and limited resources, to detect abuse if it exists. In view of this

informational asymmetry, it is quite possible that many past occurrences of self-dealing abuse may have escaped regulatory scrutiny.<sup>2</sup> For the same reason (i.e., informational asymmetry), regulatory options designed to discourage self-dealing abuse may be more effective than options designed to detect abuse.

On the other hand, the suspected abuse is a potential problem. It is hard to conclusively establish that self-dealing, regardless of the difficulty of detection, is either inherently abusive or economically inefficient. In fact, there may be economies of scope, coordination, and learning inherent in self-dealing transactions that benefit ratepayers. Therefore, the regulator is faced with the task of balancing the costs and benefits of self-dealing and of crafting policies that best serve the ratepayers.

The task of developing effective policies to address self-dealing involves a set of inter-related issues. Besides the general issue of whether self-dealing harms or benefits ratepayers, the PUC has to consider whether it has authority to intervene in self-dealing transactions and at what stage of the transaction. Further, the PUC may wish to know what form of intervention, and at what stage of the transaction, is likely to be most effective in meeting regulatory goals, regardless of its authority to do so. For example, the PUC may have the authority to examine the books and records pertaining to utility power purchase transactions but, for most cases, may choose not to exercise this authority. Instead, the PUC may require the utility to implement an approved competitive bidding procedure for power purchases, with remediation processes available to losing bidders, as a more effective means of protecting against self-dealing abuses. Also, the PUC needs to consider the traditional regulatory issue of equity among stakeholders and the level of stakeholder intervention desired or anticipated to resolve self-dealing issues. The PUC needs to consider the incentives provided to the utility and other parties by alternative regulatory policies. Furthermore, the PUC may wish to consider, besides standard or general regulatory principles, past performance and other relevant history of an individual utility to address specific self-dealing

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<sup>2</sup> See Chapter 4 for a discussion of alleged cases of self-dealing abuse by electric utilities.

transactions. Finally, the PUC may wish to consider the informational needs and administrative efficiency of alternative regulatory options. Given the diversity of electric utilities both within and across jurisdictions, the political climate in different states, and the historical experience of individual PUCs with self-dealing issues, current regulatory policies regarding self-dealing vary widely between complete prohibition of affiliate power transactions to a case-by-case approach. No PUC, however, forbids utility-owned generation although some PUCs exclude the host utility from bidding in a competitive bidding process.<sup>3</sup>

### **Addressing Self-Dealing in the Emerging Electric Power Industry**

The current policies, however, regardless of their general merits or their appropriateness for individual PUCs, may no longer serve the intended regulatory objectives in the face of emerging competition in the electric power industry, signaled by the passage of the Energy Policy Act of 1992 (EPAAct). EPAAct was intended to facilitate market forces that have been developing in the generation sector of the industry. EPAAct, along with new market forces, is expected to revolutionize the industry. Competition is likely to spread throughout the industry. Customers will have more choices of generators and vice versa. The new competitive environment expands access to the market to new entrants.<sup>4</sup> The strong future outlook for an essentially unregulated independent power market is suggested by the significant growth in independent power ventures by U.S. utilities in both this country and abroad. The new environment may encourage new organizational structures and business strategies among market participants. One likely development, facilitated by EPAAct provisions on

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<sup>3</sup> According to a survey accompanying this report, nine state PUCs prohibit the host utility from bidding in a competitive bidding process.

<sup>4</sup> According to some analysts, significant barriers to the development of a competitive wholesale market still remain. See Steven M. Lewis and Janet G. Besser, "The Competitive Generation Market Has Been Assumed, Not Proven," *The Electricity Journal* 8, no. 3 (April 1995): 70-73. See also, National Independent Energy Producers, *Is Competition Here? An Evaluation of Defects in the Market for Generation* (Washington, D.C.: National Independent Energy Producers, April 26, 1995).

exempt wholesale generators (EWGs), may be an increase in the formation of energy-related subsidiaries as EWGs by a parent holding company that also owns regulated utilities. The subsidiaries may occupy a significant share of the IPP market and may construct and operate, power plant and other energy service projects for regulated utilities.

The anticipated increase in utility affiliates participating in the IPP market may exacerbate the potential problem of self-dealing abuse. The parent holding company, for example, may be able to make above-market profits by having its subsidiaries sell power at inflated prices or under other unfavorable terms to affiliated utilities. This would be especially true if regulators have difficulties detecting abuse, the utility company shows no profit from purchasing independent power, and retail customers are "forced" to pay the price set by the affiliate.

The new environment for the electric power industry merits reexamination of current regulatory policies to address self-dealing. On one hand, the increased competition calls for less intervention into utility operations. This implies that traditional regulatory safeguards to restrain self-dealing abuse may be considered unduly intrusive. On the other hand, the new environment increases opportunities for self-dealing abuse, which may not be effectively restrained even by the traditional regulatory instruments. It appears that regulators may be faced with somewhat of a "double jeopardy." Lowering the level of scrutiny, warranted by the new market environment, would exacerbate further the problem of potential self-dealing abuse, already exacerbated by the new market environment. Another point that adds to the dilemma and complicates regulatory policymaking is the possibility that the market may provide its own restraints on self-dealing abuse and may, in fact, facilitate the utilization of potential economies of self-dealing transactions to the ratepayer's benefit. The solution may lie in exploring a menu of regulatory options, any one of which may contain a combination of traditional regulatory instruments and new market-based incentives, and evaluating the effectiveness of each option for utilities under a given jurisdiction. The preferred regulatory option would rely more on inducing efficient

behavior by offering an effective incentive structure and less on regulatory scrutiny and oversight.

### **Objectives of the Study**

This study is intended to provide regulators with information on current regulatory policies and practices regarding self-dealing with an examination of underlying regulatory issues and an evaluation of alternative policy approaches and with regulatory mechanisms to effectively address self-dealing.

The study provides information on current regulatory practices that address self-dealing. The information includes authority and jurisdiction of PUCs over utility diversification, policies and procedures that address self-dealing transactions, past experience of PUCs with self-dealing and anticipated future evolution of PUC self-dealing policies. The study examines regulatory issues underlying self-dealing transactions. These issues include opportunities for self-dealing and potential abuses in current resource selection practices of utilities, the merits and demerits of self-dealing, and implications of the emerging competition in electric generation markets for self-dealing. Finally, the study develops and evaluates policy approaches and regulatory mechanisms to address self-dealing. This part of the study examines incentives embedded in current regulatory practices for promoting or restraining self-dealing abuses, and their efficacy in the rapidly evolving competition in electric generation markets. The study proposes new regulatory approaches and mechanisms, and evaluates their efficacy relative to each other and to traditional approaches and mechanisms.

### **Organization of the Report**

The remainder of the report is organized as follows. Chapter 2 describes resource selection processes used by utilities and identifies potential opportunities for

self-dealing. Chapter 3 discusses the merits and demerits of the self-dealing transaction. The merits, which are not well-recognized, include potential economies and efficiencies of scope, coordination, and learning inherent in self-dealing transactions. The chapter elaborates on well-recognized demerits of self-dealing, such as unfair treatment of competitors, inflated payments to an affiliate, and cross-subsidization of costs. Chapter 4 reports current regulatory mechanisms and practices that address self-dealing and identifies stages of the self-dealing transaction at which the PUC can intervene. Chapter 5 examines the implications of the emerging competition in electricity markets for self-dealing. Chapter 6 develops regulatory approaches and mechanisms to restrain self-dealing abuses and, if possible, to utilize potential economies of the self-dealing transaction to the ratepayer's benefit. The proposed mechanisms are evaluated and compared to each other and to traditional regulatory mechanisms in terms of advancing specific objectives. Finally, Chapter 7 summarizes the findings of the study and proposes recommendations.

## CHAPTER 2

# OPPORTUNITIES AND INCENTIVES FOR SELF-DEALING BY UTILITIES

### Introduction

As discussed in Chapter 1, a utility has many options to build, acquire and operate resources and facilities for the purposes of delivering power and other energy services to the ultimate customers. As defined in that chapter, any of the options that involve either the utility or an affiliate in the provision of resources or services would constitute self-dealing. According to this broad definition, any resource choice other than that which involves purchase of capacity, power or other energy services from an unaffiliated entity constitutes self-dealing. This report focuses on self-dealing transactions involving purchases of capacity or energy.<sup>1</sup>

There is nothing inherently either beneficial or harmful about self-dealing. However, self-dealing offers the utility opportunities and incentives to engage in inefficient or abusive behavior harmful to ratepayers. The presence of the following conditions provides incentives for, or otherwise facilitates, self-dealing abuse.

### **Utility or Parent Company Gains Economically from Self-Dealing**

The utility or its parent company may receive an economic advantage, often resulting in higher profits, when the local utility purchases electricity, particularly at an inflated price or under favorable nonprice terms and conditions, from an affiliate. Alternatively, the utility is better off generating its own power than purchasing power from an unaffiliated company. In both cases, the utility has no direct advantage if it

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<sup>1</sup> In the remainder of this report, the term "power" is used interchangeably with either capacity or energy or both.

purchases power from an unaffiliated company. For example, the parent company stands to benefit when an affiliated generator receives above-market prices for its services that are funded by the retail customers of the utility company (i.e., the affiliate generator inflates the price it charges to the utility company). This is more likely to occur when the wholesale market in which an affiliate operates is more competitive than the utility's retail market. This condition currently holds in U.S. electric power markets.

### **Retail Customers Have Limited Opportunities**

Virtually every utility currently in U.S. wields monopoly power and enjoys exclusive franchise rights over its service territory. Retail customers have very limited access to nonutility sources of electricity. This allows the utility to engage in self-dealing and reap the economic advantage discussed above.

### **The Utility Is Legally and Technically Able to Engage in Self-Dealing**

As mentioned, utility-owned generation has traditionally been the form of resource selection. Also, most regulated utilities are not prohibited from purchasing power from an affiliate. Under these circumstances and in the absence of legal or technical impediments (such as transmission access), a utility is likely to engage in self-dealing if it expects to gain economically from doing so.

### **Regulators Have Limited Ability to Detect Self-Dealing Abuse**

It is well known that there is an informational asymmetry between the regulator and the utility. The regulator has limited access to the information related to a utility's true needs, costs, and efforts. The regulator also has limited resources to examine utility information to which it does have access. This general problem of informational

asymmetry translates into the regulator's limited ability to distinguish between prudent and imprudent costs. This limitation makes it difficult for the regulator to detect abusive self-dealing when it occurs. The current trend in government downsizing may further reduce the administrative resources available to regulators to detect self-dealing abuse.

### **Overview of the Utility Resource Planning and Power Delivery Process**

Opportunities for self-dealing are available to the utility at different stages of the process that begins with resource planning and ends with power delivery. At each of these stages, the PUC generally has some oversight role. Self-dealing abuse occurs when the utility is willing and able to circumvent the intended purposes of PUC oversight at any of these stages to serve its own interests to the detriment of ratepayers' interests.

### **Integrated Resource Planning**

In more than three fifths of the states, regulated utilities use an IRP to select resources to meet future needs of its customers.<sup>2</sup> The adoption of IRP may be either voluntary or required by the state PUC. In some PUC jurisdictions, utilities may opt voluntarily for an IRP process, although it may not be mandatory to do so, because of the perceived reduction of regulatory risk. A resource plan that wins some degree of regulatory approval or acquiescence is less likely to be subject to unfavorable *ex post* reviews or disapproval.

The format of the IRP, as well as the specific PUC procedures to oversee it, vary among different state jurisdictions. However, the typical IRP process consists of

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<sup>2</sup> As of September 1994, thirty-two PUCs have formal IRP regulations in place. See Edison Electric Institute, *Integrated Resource Planning Handbook: 1994 Sourcebook* (Edison Electric Institute: Washington D.C.: 1995), 8,9.

several stages of plan development and PUC oversight. The plan development stages include demand forecast and resource needs determination, and resource selection. The related PUC oversight stages include rulemaking that addresses IRP issues, the utility's submission of the preliminary IRP for PUC review and comments from interveners, revisions of the plan in response to review and comments, and in many jurisdictions, final PUC approval of the plan.<sup>3</sup>

### **Implementation of the Resource Plan**

The resource planning stages are followed by implementation stages. The utility may build or acquire plants, purchase capacity or energy, and implement DSM programs to carry out the plan. For purchasing capacity or energy, the utility may directly negotiate with either NUGs or other utilities. Alternatively, the utility may implement a competitive bidding program for capacity and power procurement. The competitive bidding program has several stages. It generally starts with a Request for Proposal (RFP) that specifies the capacity and power needs and other related information. The next stage consists of collecting and evaluating proposals submitted and choosing winning proposals. Finally, the utility negotiates with the winning bidders to finalize power purchase contracts. The terms and conditions of such contracts are consistent with the provisions of the RFP but spelled out in more detail. Some minor deviations in the final contract from the intended provisions of the RFP are expected.

The PUC may be involved in different stages of the competitive bidding process in various degrees. For example, some PUCs may require advance approval of the RFP before it is issued, although this is not true in most jurisdictions. Also, the PUC may choose to oversee the bid evaluation process. Finally, the PUC may have the authority to approve or disapprove the final power purchase contract.

The last of the implementation stages is the building of power plants, generation

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<sup>3</sup> As of September 1994, twenty-one state PUCs required formal approval of the IRP. See Edison Electric Institute, *Integrated Resource Planning Handbook: 1994 Sourcebook*, 21.

of power, and implementation of DSM programs. Both the PUC and other providers of energy services may be involved in these activities. At different phases of this stage, the PUC plays the role of monitoring performance and regulating cost recovery. Traditional regulatory proceedings, such as rate hearings, fuel adjustment clause (FAC) hearings, and prudence reviews, are used to evaluate the utility's performance, and to determine revenues and rates.

### **Examination of Self-Dealing Opportunities**

The above overview is intended to be an illustration of the process that starts with utility resource planning and ends with power delivery to the end user. Both the specifics of the process and the sequence at which they occur may vary among PUC jurisdictions and among utilities. The following discussion is structured to examine the opportunities for self-dealing in each stage of the process.

### **Demand Forecasts and Resource-Needs Determination**

The first stage of the typical IRP process is developing a forecast of the customer demand. The forecasted variables include peak and average demand for electricity for each customer segment (residential, commercial, or industrial). Historical demand data, combined with demographic, engineering, and economic data, are used to develop the forecast.

The forecast may be used to develop a number of alternative generic plans to meet the demand. Each plan may include a set of resource options such as fossil-fueled power plants, renewable and demand-side management (DSM) options. The analysis is usually carried out using a computer simulation model. The analysis is usually both multistage and multilevel. For example, the first stage may be a preliminary screening analysis of plans that meet the demand and operating requirements, such as reliability and dispatchability. The next stage may attempt to

choose the optimal plan according to some cost criterion such as present value of revenue requirement (PVRR) subject to demand, reliability and dispatchability constraints. At subsequent stages, the plans may be further refined to account for environmental impacts and costs, and uncertainties and risks. One of the important outputs of this exercise is an estimate of the avoided cost, a parameter that reflects cost to the utility for meeting future demand of its customers. The avoided cost may be subsequently used as a benchmark to evaluate capacity and power generation alternatives from nonutility sources. Also, the avoided cost is the parameter used to determine whether the utility is required to purchase power from a QF under PURPA. Under PURPA, the utility must buy power from a QF if the cost of such power is less than the avoided cost of the utility.

The sequence of tasks in developing a demand forecast and determining resource needs does not necessarily follow the one indicated, and also the tasks themselves may be combined or further subdivided. The indicated sequence is intended as an illustration and many variations on the sequence are possible. For example, the IRP developed by the Colorado Public Service Company started with a Request for Information (RFI) from potential suppliers (nonutility generators and other utilities).<sup>4</sup> The RFI did not contain specifications of resource needs of the utility. Submissions in response to the RFI was used to develop the generic plan. Normally, one would expect NUGs and other utilities to be involved in the process after the utility has developed a preliminary statement of resource needs. In the

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<sup>4</sup> Public Service Company of Colorado, *Integrated Resource Plan, October, 1993: A Balanced Approach to Meeting Customers' Future Electricity Needs*.

above case, however, the utility chose to gather information on the resources available to NUGs before publicly disseminating its resource needs.

Demand forecasts and determination of resource needs provides the utility with both incentives and opportunities for self-dealing. In the past, utility-owned generation was the dominant form of resource selection and the utility was allowed to earn a return on its rate base. It has long been the conventional wisdom that under those circumstances, the utility had a clear incentive for overstating future demand, and for preferring capital-intensive, large generation plants—the famous “A-J effect.”<sup>5</sup>

In the current climate characterized by increasing competition, the incentives and opportunities for self-dealing may be somewhat different. Most utilities may now be more concerned with utilizing existing plants that may become “stranded” if customers have access to cheaper alternatives.<sup>6</sup> The utility may no longer be motivated to overstate its demand and may in fact choose to reveal its best good faith estimate of its future demand.<sup>7</sup> Also, in determining its resource needs, the utility may have a preference for fuels and technologies that favor the utility or its affiliates in subsequent resource selection. Given the high degree of discretion and flexibility available, and necessary, in choosing data, simulation methods and interpreting results, the utility may be able to favor its preferred alternatives. As mentioned, the regulator and other parties have generally limited access to information on the utility's true needs. Therefore, distortions introduced into demand forecasts and resource-needs determination by the utility's own preferences may be hard to detect.

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<sup>5</sup> H. Averch and L.L. Johnson, “Behavior of The Firm under Regulatory Constraint,” *American Economic Review* 52 (1962): 1053-69.

<sup>6</sup> This report does not discuss the stranded costs issue. For an overview of the issue, see Robert E. Burns, “A Capsulization of the New FERC Electric Mega-NOPR,” *NRRI Quarterly Bulletin* 16, no. 2 (1995): 197-201. For an examination of regulatory options to address stranded costs, see Scott Hempling, Kenneth Rose, and Robert E. Burns, *The Regulatory Treatment of Embedded Costs Exceeding Market Prices: Transition to A Competitive Electric Generation Market: A Briefing Document for State Commissions* (Columbus, OH: The National Regulatory Research Institute, 1994).

<sup>7</sup> The utility may expect to make up for any future capacity shortage with purchases from the wholesale spot market, which is likely to develop. On the other hand, the utility may be unwilling to risk any future regulatory disallowances for excess capacity.

## **Resource Selection**

Demand forecast and resource-needs determination are followed by resource selection. Usually, this stage of the process involves selecting the best plan among candidate plans analyzed in the resource-needs determination phase. Plans may be ranked by some cost objective as well as other (environmental, fuel diversity, reliability, and so on) criteria. Each criterion may be assigned a weight to find a composite score or the ranking may be purely qualitative. In either case, cost is normally considered to be the dominant factor in comparing alternative plans.

As in the case of demand forecasting and resource-needs determination, resource selection also provides the utility opportunities to favor its own preferred options. If the utility has some foreknowledge of the resources available to its competitors, it can skew its resource selection in favor of resource options available or accessible to itself or its affiliates.

### **Informational Requirements and Procedural Sequence in the IRP**

The informational requirements and the sequence of procedures used in an IRP process may also provide different incentives and opportunities to a utility to favor itself or an affiliate.

The utility has significant discretion on the types, and the level of detail, of the information disseminated at different stages of the IRP process. The utility, for example, can withhold critical information on its needs during the initial phases of the IRP process. The utility can subsequently reject offers from unaffiliated providers on the ground that they do not meet the needs of the utility.

Also, the sequence of procedures in an IRP process allows a utility to strategically time its disclosure of power needs. For example, if the IRP process requires a disclosure of the utility's power needs before issuing an RFP, the utility may choose to be tentative and nonspecific. Then, the utility can choose to be more

specific about its power needs on the RFP. This allows the utility more time than its potential competitors to prepare bids. This advantage can, of course, be overcome if the utility is required to disclose its power needs in comparable levels of details in both the IRP and the RFP, or if the time between the issuance of the RFP and the submission of bids is sufficient for all parties to prepare bids.

In another variation of the process, as mentioned previously, the utility can issue an RFI to potential providers and develop the IRP on the basis of the information received.<sup>8</sup> This gives the utility access to the information on the resources of potential competitors and the ability to use such information in the subsequent development of the IRP.<sup>9</sup> It can be seen that the procedural sequence in an IRP process, regardless of its design, can be used to the utility's advantage. It is, therefore, important to introduce safeguards to offset this advantage.

### **Conflicting Objectives in the IRP Process**

Although the utility has superior information about its power needs than its potential competitors, which could be unfairly used by manipulating the disclosure requirements and the procedural sequence in an IRP process, one needs to recognize that the utility does not have perfect information. Also, utility resource

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<sup>8</sup> Ibid.

<sup>9</sup> For a criticism of the informational advantage gained by the utility through the RFI mechanism, see "Initial Comments of the Van Horn Consulting Group on Behalf of the Colorado Independent Energy Association In Response to the Commission's Notice of Proposed Rulemaking Regarding Integrated Resource Planning and Qualifying Facility Rules," Docket No. 95R-071E, April 3, 1995.

planning is not a static, perfect process with a fixed knowledge base. Instead, it is a dynamic, imperfect process that operates on an evolving knowledge base. In other words, the IRP is both a planning and a learning exercise for the utility. Therefore, the utility should be allowed some flexibility in developing an IRP in recognition of the learning aspect of the process. Finally, during the implementation stage, unanticipated events may require modification of the IRP. This possibility indicates the need to build sufficient flexibility into the resource plan and to provide regulatory sanctions to facilitate necessary and justifiable changes during the implementation stage of the plan.

The above discussion underscores the need for achieving a balance between two conflicting objectives: the provision of sufficient access to information about the utility's needs to all interested parties, and the utility's need for flexibility and discretion in the demand forecast, resource needs-determination, and resource selection phases of the process.

### **Resource Acquisition**

The utility can procure power or capacity through either directly negotiated contracts or through a competitive bidding process. In doing either, the utility is subject to PURPA. PURPA requires the utility to purchase capacity or power from a cogenerator or a QF whenever the avoided cost of the utility is above the purchase price from these entities. Both direct procurement and competitive bidding offer the utility opportunities for self-dealing.

#### **Self-Dealing Opportunities in Direct Procurement**

Direct or sole-source procurement allows the utility to engage in uneconomical self-dealing in three different ways—distorted avoided costs, cost-adjustment provisions in purchase contracts and nonprice terms in the contracts.

A utility may distort its avoided costs to unduly favor utility-generated power or power purchases from an affiliate. The utility may understate its avoided costs to preclude purchases from a QF. This would allow the utility to supply its own power or make purchases from an affiliate without violating the provisions of PURPA. If the utility has an affiliate that happens to be a QF, the utility has the advantage of writing a purchase contract with the QF while complying with the provisions of the PURPA. In this case, the utility can overstate its avoided cost for making inflated payments to the affiliate.<sup>10</sup>

If the utility chooses to either build its own facility, traditional regulatory processes allow for adjustments to costs whenever they deviate from projections.<sup>11</sup> If construction costs are higher than projected, the utility can ask the PUC for rate relief to reflect unanticipated changes in costs. Also, fuel cost changes can be recovered, without a regulatory proceeding, through the FAC. Such cost-adjustment mechanisms may allow the utility to understate its avoided costs for capacity or energy, avoid the PURPA requirement of purchasing from QF, and then later recover the true costs or inflated costs later through cost-adjustment mechanisms.

If the utility chooses to purchase power from an affiliate, contracting terms may allow the utility to adjust payments to reflect changes in projected costs. The utility may be able to discriminate against unaffiliated power suppliers by including favorable terms for cost adjustments for affiliates and less lenient terms for nonaffiliates. Combined with the opportunity to distort avoided costs, the utility may be able to win regulatory approval for a purchase contract with an affiliate with a presumably understated avoided cost and allow the affiliate to recover the

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<sup>10</sup> The utility, however, may not be able to do so if other QFs with comparable or lower costs challenge the purchase.

<sup>11</sup> Cost-adjustment provisions are discussed further in a subsequent section entitled "Contracting."

true cost or even a higher cost through cost-adjustment mechanisms available in the contract.

A utility may also be able to favor an affiliate by strategic use of nonprice terms of a contract. For example, reserve margins, dispatch requirements, and other reliability requirements can be set to discriminate against an unaffiliated company. The associated performance bonds can be set more or less leniently to favor one generator over another. By using nonprice terms of contracts strategically, the utility may be able to justify the use of an affiliated company over another.<sup>12</sup>

### **Self-Dealing Opportunities in Competitive Bidding**

#### **Overview of the Bidding Process**

Many of the opportunities for inefficient self-dealing can be countered or limited by using a competitive bidding procedure. Competitive bidding allows the utility fewer opportunities for strategically using its information and intelligence to unduly favor itself or an affiliate in resource acquisition and delivery of energy services. The ability of a competitive bidding process to limit opportunities for self-dealing abuses depends on how the bidding process is designed and implemented.

As mentioned, there are three stages in a typical competitive bidding process: (1) preparation and issuance of the RFP, (2) evaluation and selection of bids, and (3) post-bidding contracting and negotiation.<sup>13</sup>

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<sup>12</sup> Nonprice terms are discussed further in a subsequent section under "Nonprice Bid Evaluation Criteria."

<sup>13</sup> A detailed description of the procedures involved in the competitive process can be found in Daniel J. Duann, Robert E. Burns, Douglas N. Jones, and Mark Eifert, *Competitive Bidding for Electric Generating Capacity: Application and Implementation* (Columbus, OH: The National Regulatory Research Institute, November 1988).

### Preparation and Issuance of the RFP

Preparation of the RFP involves the following steps: (1) determining the supply block, (2) calculating the avoided cost, and (3) specifying bidding criteria.

The supply block is the amount of capacity and the associated energy generation sought by the utility to meet its future needs. The supply block is an output of the analyses of the resource needs and resource selection, discussed in preceding sections. The supply block depends on many factors, including the amount of existing capacity, scheduled operation and capacities of plants under construction, projected demand growth, the effect of DSM programs on future demand, economies of scale, advances in generation technology and the planning horizon.<sup>14</sup> For example, generation technologies enjoyed significant economies of scale in the past. Therefore, past bidding programs were characterized by long planning horizons and large supply blocks. These conditions no longer hold, particularly with the advent of low-cost gas turbines, and future bidding programs are likely to be characterized by short planning horizons and small supply blocks.

Once the supply block is determined, the next step is calculation of the avoided cost. As discussed, avoided cost is one of the important parameters obtained from the analysis of resource needs. The avoided cost can be calculated using a variety of methods. The general approach consists of finding the cost of the optimal resource plan if the host utility were to build the needed facilities and supply the needed energy.

The next step consists of specifying the bidding conditions. The specifications include the supply block, the avoided cost schedule, the pricing formula, the nonprice performance criteria,<sup>15</sup> a formula for ranking and scoring the criteria, and bidder

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<sup>14</sup> Ibid., 9.

<sup>15</sup> Nonprice bidding criteria are discussed in a subsequent section of this report.

qualification questionnaire.<sup>16</sup> The price and nonprice criteria are listed in Table 2-1. The pricing formula determines the payments to winning bidders, and may or may not equal to bid prices submitted. The ranking formula assigns weights to be used in scoring a bidder for specific criteria. The weighted scores are then added to find the composite score.

#### The Solicitation, Evaluation and Selection of Bids

State commissions require utilities to publicize bids during a specified solicitation period. Typically, the bid solicitation must be advertised in one widely circulated state newspaper and in one widely circulated trade journal. The solicitation period may vary between 90 and 120 days.<sup>17</sup>

After the solicitation period, the submitted bids are opened, examined, ranked and evaluated. The ranking, as discussed, are based on bid prices and composite scores derived from the ranking formula. The primary responsibility for evaluating bids lies with the utility, as the PUC is generally not involved. If the bid selection is contested, or as a general policy, a PUC may conduct hearings after the bid evaluation and selection process to ensure compliance with commission rules and guidelines.

#### Post-Bidding Contracting and Negotiations

Bid selection is followed by negotiations between the host utility and each winning bidder to execute a legally binding power purchase contract. It is expected that the terms and conditions set in the contract will closely correspond to those

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<sup>16</sup> Duann et al., *Competitive Bidding for Electric Generating Capacity: Application and Implementation*, 10.

<sup>17</sup> *Ibid.*, 11.

TABLE 2-1 EXAMPLES OF BIDDING CRITERIA	
•	Price
•	Prospects for development
•	Financial viability
•	Project longevity
•	Management experience
•	Performance guarantees
•	In-service data guarantees
•	Progress toward location
•	Planning flexibility
•	Maintenance scheduling
•	Reliability effects
•	Maturity of technology
•	Impact on power quality
•	Fuel type
•	Fuel flexibility
•	Fuel supply security
•	Compatibility w/fuel goals
•	Environmental impact
•	Dispatchability
•	Contract length

Source: Adapted from Kenneth Rose, Robert E. Burns, and Mark Eifert, *Implementing a Competitive Bidding Program for Electric Power Supply* (Columbus, OH: The National Regulatory Research Institute, 1990), 56.

set in the RFP. However, departures from the RFP may be necessary, and even desirable, since every contingency cannot be spelled out in the RFP. However, substantial departures from the RFP, particularly the pricing formula and cost-adjustment provisions, are generally not desirable and are not likely to be allowed.

### **Self-Dealing Opportunities in the Bid Selection Process**

The features that may affect self-dealing opportunities include confidentiality of bid submissions, disclosure of the bid evaluation criteria, bid pricing options, nonprice bid evaluation criteria, regulatory involvement in the bid selection process, and the eligibility criteria for bidders.

#### Confidentiality of Bid Submissions

Bid submissions can be either open or sealed. Open auctions, such as oral Dutch or English auctions, are common for ordinary assets, and commodities such as houses, cars or antique items. However, for a commodity such as electricity with multiple and complex attributes, oral auctions are not practical. One possible form of an open auction would inform the bidders of the proposals made by other bidders.<sup>18</sup> However, such an arrangement would impose enormous costs of revealing bid information to all participants. Currently, all bidding for electrical power and DSM services use sealed bid submissions. It is, however, possible that auctions with varying degrees of openness may evolve with time as utilities and PUCs gain more experience with bidding.<sup>19</sup>

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<sup>18</sup> Rose et al., *Implementing A Competitive Bidding Program for Electric Power Supply*, 50.

<sup>19</sup> Ibid. Also, computerization of bid submissions and related automated scoring of bids may make open bids viable in the future.

The more common alternative, sealed bidding, offers both opportunities and constraints for self-dealing. Because sealed bidding precludes the utility or the affiliate from knowing the proposals offered by others until after the bid is closed, the utility or an affiliate does not have an opportunity to strategically time its own submission at the end and underbid all the other proposals. However, although a sealed auction limits opportunities for the utility to strategically time or price its bid, it also impedes other participants from challenging the selection made by the utility. Because only the utility knows the bid prices and supply proposals offered, the utility can exercise considerable discretion, absent PUC or third party oversight, in selecting bids without the fear of challenge by losing bidders. This may allow the utility to preferentially select bids offered by an affiliate. This also allows the utility to reject all bids in favor of its own proposal without the threat of detection by other bidders. Both of these abuses may occur, especially if the avoided cost of the utility is not known to other bidders unaffiliated with the utility and a predetermined avoided cost is used as a ceiling to evaluate bids.

Open bids, if they were to occur in the future in some limited form, also present opportunities and constraints for self-dealing. Because bidding information is available to all bidders, the utility is more open to challenges by losing bidders after bid selection. On the other hand, open bids allow the utility or an affiliate to strategically time and price its bid. The same opportunity, however, is available to the other participants and the utility or an affiliate may not have any significant additional advantage. But the utility and the affiliate may have more information on the true capacity and energy needs of the utility. Therefore, the utility and its affiliates may still have some residual advantage over other bidders.

#### Disclosure of the Bid Evaluation Criteria

The criteria used to select bids may or may not be disclosed to participants in advance. The disclosure or nondisclosure of bid evaluation criteria may have

significant effects on strategic behavior, including collusion and self-dealing, of the utility and other participants.

In disclosed bidding, the participants all know in advance all the price and nonprice criteria that will be used to evaluate bids. An example of the possible criteria is listed in Table 2-1. Prior disclosure of evaluation criteria allows a participant to assess its resources, skills, and facilities, make a decision on whether it should submit a proposal, and make a determination of additional resource needs and facilities adjustments necessary to fulfill the terms of the bid. Potential bidders who are unlikely to qualify, or unlikely to be viable energy suppliers, have an opportunity to opt out of the bidding process. Consequently, disclosed bidding, by allowing participants to efficiently self-select, reduces the administrative and cost burden of the bidding .

In addition to the above advantages, disclosed bidding can limit self-dealing. Since the bid evaluation criteria are known in advance to all potential bidders, the host utility or an affiliate does not have any significant informational advantages. The utility is unlikely to design the evaluation criteria to unduly favor itself or an affiliate because such "gaming" is likely to be recognized by potential bidders, the PUC and other parties. Also, the utility is less able to favor itself or an affiliate during the bid selection process because the criteria are transparent to all interested parties and misapplication of the criteria is likely to invite protests and intervention.

However, disclosed bidding can cause another problem, which may harm ratepayers as much as self-dealing. Advance knowledge of bid evaluation criteria can allow potential bidders to collude among themselves. In one form of collusion, bidders can "rotate" the winning<sup>20</sup> bid among themselves. In this case, the winning bid is likely to have a higher price than it would have in the absence of collusion.<sup>21</sup> However, there

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<sup>20</sup> Rotation refers to a strategy which may be used if a series of bids is anticipated. Then, members of the collusion may arrange, by mutual agreement, to have a different member submit the lowest bid in each occurrence bidding. For more discussion of this form of collusion, see *Ibid*.

<sup>21</sup> An example of such a "daisy chaining" arrangement was uncovered in 1960. The arrangement involved several electrical equipment manufacturers in an elaborate market allocation scheme. See Richard A. Smith, "The Incredible Electrical Conspiracy," *Fortune Magazine* (April 1961), 132-224.

is no evidence so far of this form of collusion in the power sales business. But the possibility of its occurring in the future cannot be ruled out.

Undisclosed bidding, on the other hand, allows the host utility greater opportunities for self-dealing. In designing bid criteria, the utility can favor itself or an affiliate. Because the criteria are not known to potential bidders in advance, any skewing of the bid criteria is not open to challenges. Also, the utility can favor itself or an affiliate in the bid selection process if the process is not open to third party scrutiny. However, the utility is open to challenges by other parties once a winner is declared at which time the evaluation criteria would be known to all parties. But, this, after-the-fact opportunity for scrutiny by contending parties is, at best, a weak incentive against self-dealing.

However, undisclosed bidding limits collusive behavior among potential bidders (other than the host utility and affiliates). Since the bid evaluation criteria are unknown to bidders, they have no basis to form agreements on how to "game" bids to guarantee a winner among colluders.

In summary, when choosing between disclosed and undisclosed bidding, one needs to trade off two sets of advantages and disadvantages. Disclosed bidding restricts self-dealing but offers opportunities for collusion among nonutility bidders. Undisclosed bidding restricts opportunities for collusion among nonutility bidders but offers opportunities for self-dealing to the utility. Disclosed bidding encourages efficient prescreening but may not completely eliminate nonviable bids. Undisclosed bidding does not provide any screening, but induces the bidders to reveal their true cost and performance potential, and makes it more likely that only viable projects will win.

In choosing a bid disclosure option, all of the above opportunities for self-dealing and collusion, as well as other consequences of a given choice, need to be considered. Also, appropriate oversight mechanisms need to be designed to limit abuses arising from, and utilize advantages of, the chosen option.

### Bid Pricing Options

The price paid to the successful bidder(s) generally follows a rule based on the lowest bid price, design features and stipulations for future price adjustments. The paid price may be individually contracted or uniform for all successful bidders. Also, the price paid can be either binding or open to future negotiations.

Under a contract pricing arrangement, the successful bidders are paid the bid price. This pricing arrangement appears to be fair because all bidders are bound by their offers. It is also easier to implement because it is a transparent arrangement clear to all participants.

However, this pricing arrangement itself has only weak incentives for the bidder to reveal its true cost. The reason is that the bidder may be willing to bid higher than its true cost if the additional risk of losing the bid from this action is offset by the expected gain from earning an economic profit, in this case the difference between the bid price and the true cost. If all or most bidders adopted this strategy, it is likely that the winning bid will be above the true cost of the bidder. So, the efficiency gain from the anti-collusion properties of this pricing arrangement may be offset by the efficiency loss discussed above.

The alternative to contract pricing is uniform pricing. The most well-known uniform pricing arrangement is a second price or Vickerey auction. Under this scheme, the price for the winning bidder(s) is set at the lowest price of the losing bidder(s). This pricing scheme has superior truth revealing properties compared to contract pricing. The bidder has a stronger incentive to reveal its true cost because the winning bidder is paid higher than the bid price and has an opportunity to earn an economic rent.<sup>22</sup> The bidder may no longer be motivated to bid higher than its true cost because the price paid to the bidder is not the bid price and the economic rent to be earned by the

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<sup>22</sup> Both first price and second price bidding allows a bidder to earn an economic rent. The critical difference is that the bidder needs to bid higher than its true cost and thus risk losing the bid in first-price bidding, but does not need to do so in second-price bidding.

winning bidder is independent of the bid price. Further, bidding a higher than the true cost lessens the bidder's chances of winning the bid.

In spite of the superior truth revealing properties, second price bidding is also subject to manipulation and collusion by the host utility, its affiliates and others. For example, a sealed bidding, which is the normal practice, the utility may arrange to have bids submitted by one of its affiliates below the true cost, and have another bid submitted by itself or an affiliate above the true cost. The underbidding improves the chances of the affiliate winning the bid while having an opportunity of being paid above the true cost. Several scenarios can be contemplated on the outcome of this strategy and are discussed below. Assuming that the true costs of the utility and the affiliate are the same, the following scenarios are identified:

1. The true costs of all unaffiliated bidders are above the true cost of the utility; and they all bid truthfully and the lowest bid among them is above the bid price of the utility. The utility wins the bid. In this case, no harm is done because the price paid is lower than the lowest bid of the unaffiliated bidders.
2. The true costs of all unaffiliated bidders are above the true cost of the utility; they all bid truthfully, and the lowest bid among them is below the bid price of the utility but above the true cost of the utility. An unaffiliated bidder wins the bid. In this case, no harm is done because the price paid is equal to the lowest losing bid.

3. The true costs of the bidders are below the true cost of the utility; they all bid truthfully, and the lowest bid is above the bid price of the affiliate but below the bid price of the utility. In this case, the affiliate wins the bid and apparently undertakes an unviable project in that it is paid a price below its true cost. However, once the affiliate wins the bid, the utility has an opportunity to make up for the shortfall or even allow the affiliate to earn a profit through future price adjustments and contract renegotiations.
4. One or more of the unaffiliated bidders has a true cost below the true cost of the utility and bids truthfully. Either the utility or the affiliate bids below its true cost. The bid price of an unaffiliated bidder is still below the bid price of the utility or the affiliate. In this case, the unaffiliated bidder wins the bid but earns a lower economic rent than it would otherwise have if everyone were truthful in their bidding.

From the above discussion, it would appear that all four scenarios result in outcomes that are favorable to ratepayers. In addition, over or underbidding by the utility or an affiliate generally results in reducing the economic rent of the winning bidder, which is even more beneficial to ratepayers. However, this is not entirely true because the knowledge that such outcomes may occur weakens the incentive of an unaffiliated bidder to reveal its true cost because doing so may not result in making a high enough profit. It needs to be noted that the truth revealing properties of second price bidding are weaker for the utility or an affiliate because either of these parties has a better opportunity to make up for any shortfall<sup>23</sup> in the event that either party wins a bid but is awarded a bid price below its true cost. Also, in a sealed bid, the utility has the opportunity to introduce fictitious bids to arbitrarily reduce the profit of an unaffiliated bidder.<sup>24</sup> In that case, the unaffiliated bidder has an opportunity to raise its

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<sup>23</sup> Such shortfalls can be recovered by including favorable terms in the final power purchase contract. This issue is discussed further in a subsequent section under contracting.

<sup>24</sup> This would be especially true if there are opportunities for breaching or circumventing the confidentiality of sealed bids.

potential rent by bidding above its true cost. If this happens, the truth revealing properties of second price bidding are essentially lost and the process reverts to first price bidding.

There are other reasons that may weaken the truth-revealing property of second price bids. Tiesberg, Rothkopf, and Kahn observed that the winning bidder has to negotiate agreements with the utility, financiers, construction contractors and others at the conclusion of the bid.<sup>25</sup> These other parties, particularly if they have any market power, may attempt to expropriate the revealed economic rent, which is the difference between the bid price and the actual payment, from the winning bidder.<sup>26</sup> To offset this effect and preserve the rent, the bidder may be motivated to bid higher than its true cost. This effect significantly reduces the truth-revealing property of second price bids and essentially transforms it into a first price bid.

Perhaps most of the disadvantages of second price bidding lies in implementation and is due to the fact that electricity is a multiattribute commodity.<sup>27</sup> For single attribute commodities, paying a slightly higher price than the lowest bid price is not unreasonable because one is still "paying for what one is getting." For a multiattribute commodity, one is not necessarily paying for what one is getting. This can reach absurd proportions, for example, if electricity produced by a gas turbine is paid a price equal to that of a windmill because based on price and nonprice criteria, the windmill happened to be the second best bid. This

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<sup>25</sup> Michael H. Rothkopf, Thomas J. Tiesberg, and Edward P. Kahn, "Why Are Vickrey Auctions Rare?" *Journal of Political Economy* 98, 1 (February 1990): 94-109.

<sup>26</sup> *Ibid.*

<sup>27</sup> Rose et al., *Implementing A Competitive Bidding Program for Electric Power Supply*, 47.

hypothetical scenario points to the complications that may arise if losing bidders and other parties intervene to challenge the bidding process.<sup>28</sup>

### Nonprice Bid Evaluation Criteria

The most difficult, and contentious aspect of the power procurement bidding process is the presence of nonprice criteria. An example of the nonprice criteria is listed in Table 2-1. These criteria relate to financing, project viability, fuel, operating performance, reliability and dispatchability, and environmental impacts. The bidding procedure follows a scoring system to rank bidders on each criterion. The final selection of bids may be based on the rankings of individual criteria and the overall score. A weighting scheme may be used to weigh the criteria differently based on their relative importance. Alternatively, the criteria may be evaluated and prioritized on a completely qualitative basis.

It is reasonable to conclude that there is a certain degree of subjectivity and arbitrariness in setting, prioritizing, and weighting the criteria, and in the final evaluation of bids. This may offer self-dealing opportunities to the utility. The utility, if it is conducting the bidding, may reject otherwise low-cost and viable bids in favor of its own bid or an affiliate's by claiming that the bid does not meet one or more of the criteria. Given the fact that other parties have only limited information on the utility's true needs, it would be hard for them to refute the claim.

### Bidder Eligibility

The bidding procedures in different jurisdictions vary as to which parties are allowed to bid. Bidders may be broadly divided into three groups: the host utility, the

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<sup>28</sup> For a detailed discussion of the problems of second price bidding, see Paul R. Gribik, "Designing An Auction for QF Generation Resources in California: What Went Wrong?" *The Electricity Journal* 8, no. 3 (April 1995): 14-23.

affiliates of the host utility and other parties. Bidding procedures may prohibit or restrict either the host utility or its affiliates or both from participating in the bid.

If the host utility is prohibited from bidding, this clearly removes a significant opportunity for self-dealing. However, this also precludes the possibility that the utility may in fact be the lowest-cost and most viable provider. Also, having the utility as the provider carries the advantages of lower transactions costs and potentially better reliability assurance. There are also cost savings associated with economies of scope and better integration of generating facilities to the transmission grid. Also, the host utility is usually subject to *ex post* prudence reviews that provide some protection against the utility's preferential treatment of itself over other suppliers. These advantages must be weighed against the disadvantages of allowing opportunities for abusive self-dealing.

In some jurisdictions, the host utility bids indirectly in the sense that it posts its avoided cost, which is the proxy for the bid price of the utility, prior to the bidding. Then, other bidders are allowed to compete against this bid price. One advantage of this option is that this forces the utility to reveal its true cost rather than provide inducements to gaming when the utility is allowed to participate in a bidding process.<sup>29</sup> The disadvantage is that other potential bidders may be motivated to bid slightly under the posted avoided cost rather than reveal their true costs. If there are truly low-cost bidders, this bidding mechanism may allow them to earn significant economic rents without any benefit to the ratepayers. One potential remedy to this problem may be to have the utility post the avoided cost to the PUC or some other third party without making it known to potential bidders. In that case, the bidding process is likely to induce bidders to reveal their true costs, subject to qualifications and limitations discussed in the preceding sections. In other words, it retains whatever truth-revealing properties the bidding procedure may otherwise have, induces the utility to reveal its

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<sup>29</sup> This would be true if the posted avoided cost is binding. A binding avoided cost means that if all the bid prices are above the posted avoided cost, the utility is bound to supply power at the avoided cost.

true costs and, yet, removes the most significant source of self-dealing, the utility itself.

However, restricting or prohibiting the host utility from participating directly in the bidding process alone does not remove the possibility of abusive self-dealing. If an affiliate of the host utility is allowed to bid, there are still possibilities of gaming and strategic behavior to favor the affiliate in the bidding process. Therefore, prohibiting or restricting a utility affiliate from bidding may merit consideration. Several PUC jurisdictions currently prohibit utility affiliates from participating in a bidding process.<sup>30</sup>

The advantages and disadvantages of prohibiting an affiliate from bidding are similar to those of imposing the same prohibition on the host utility. An additional disadvantage is that potential economies of scope and lower transaction costs may not be realized.

#### Commission Involvement in the Bidding Process

The PUC may be involved to various degrees in different stages of the bidding process. The PUC may set rules or guidelines for issuing RFPs, may issue the RFP itself, may conduct the bidding, and may make the final selection of winning bidders. The PUC may choose to involve itself to various degrees at each of the above stages of the bidding process. Also, the PUC may issue rules or guidelines to be followed at each stage. Finally, the PUC may allow or require public hearings and other opportunities for intervention from different stakeholders at each stage.

PUC involvement generally would act as a good deterrent to self-dealing abuses. The PUC can act as an objective third party on behalf of ratepayers to monitor any abusive or collusive behavior on the part of the utility, its affiliates and others. However, it is common belief that the PUC should not attempt to “micromanage” the utility for two obvious reasons. First, the utility is in the best position to know its

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<sup>30</sup> According to the survey accompanying this report, six PUCs prohibit utility affiliates from submitting bids in a competitive bidding procedure. See the Appendix.

resource needs and to make resource acquisitions. Second, any increase in the degree of PUC involvement increases administrative costs, and tends to inhibit the decision-making process through interventions and delays, and imposes additional costs on all parties. These costs are ultimately borne by ratepayers.

However, the degree of PUC involvement in the bidding process would depend on how the process, and the associated IRP process, is designed and implemented. For example, if the IRP process is closely overseen by the PUC, there may be less need for equally close oversight of the solicitation process. Presumably, the RFP will closely follow the resource needs specification contained in the IRP. As another example, if the utility and its affiliates are excluded from bidding, there is little need for PUC oversight. On the other hand, inclusion of either the utility or its affiliates probably warrants an increased level of degree of oversight of the bidding process. Similar reasoning can be extended to processes that follow bidding. If the PUC chooses to conduct retrospective reviews of power purchase contracts, then there is presumably less need for close PUC oversight at the bidding stage.

### **Self-Dealing Opportunities in Post-Bidding Negotiation and Contracting**

The last stage in resource acquisition is contracting with power or capacity suppliers. To meet its obligation to serve, the utility needs to execute a contract with the supplier to assure performance as and when required in response to customer demand. A contract usually includes secured or unsecured property liens, the right to inspect and specify maintenance and operations standards, performance security bonds, liquidated damages provisions, take-or-pay provisions, cost-escalation clauses, and force majeure clauses. Each of the above provisions of a contract has implications for contract enforceability and sharing of risks, and may provide opportunities for self-dealing.

#### Secured and Unsecured Property Liens

A property lien gives the utility the right to recover its interest in case the supplier becomes insolvent.<sup>31</sup> A secured property lien gives the utility the right to take title or possession of the supplier's property in case the supplier becomes insolvent. An unsecured property lien, on the other hand, puts the utility in line with other lien holders and creditors to recover its rights under the contract.

A secured property lien gives the utility a reasonable guarantee of the supplier's financial performance. The utility can take possession of the supplier's property in accordance with the seniority of secured interests, in case the supplier becomes insolvent or bankrupt. For example, the utility can, take possession of the supplier's plants and operate the plants. Creditors with security interests or mortgages senior to the utility would prefer such an arrangement rather than liquidation of the plants in a bankruptcy proceeding.<sup>32</sup> A secured property lien helps the utility meet its obligation to serve.

An unsecured property lien, on the other hand, provides very little protection to the utility against potential insolvency of the supplier. The utility is simply put in line to recover its interests, behind all secured liens and interests, and behind more senior unsecured interests. An unsecured property lien does not provide adequate assurance of the utility's obligation to serve.

The type of lien used by the utility with a supplier has implications for self-dealing. For example, the utility may be more willing to use a secured lien with an unaffiliated company than with an affiliated company. In other words, the utility may be more willing to assume a higher share of the performance risk if an affiliate is involved. This may be detrimental to ratepayers in two different ways.

First, lower performance risks for an affiliate may allow the affiliate to obtain financing at a lower cost. If there is no corresponding reduction of rates charged to customers, then customers are paying a premium for lowering the risk to the affiliate

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<sup>31</sup> Rose et al., *Implementing A Competitive Bidding Program For Electric Power Supply*, 68.

<sup>32</sup> Ibid.

without a corresponding benefit. Second, if the affiliate uses this potential advantage in competitive bidding, it has the ability to bid a lower price to improve its chances of winning the bid. In this case, the affiliate has a potential advantage over other bidders, which may be deemed unfair. It also means that ratepayers may not be getting power from the truly lowest-cost source.

The Right to Specify Operations and Maintenance Standards  
and to Inspect Facilities

Contracts may specify operations and maintenance standards which must be followed by the power supplier. Such standards ensure reliable delivery of power. The standards may include voltage level schedules, advance notification of planned maintenance schedules, and prohibition of planned maintenance during certain times, such as during system peak periods. The standards may also include requirements to maintain an hourly operating log of real and reactive power production, scheduled and forced outages, and unusual operating conditions. Other issues that may be covered by operating standards include emergency planning, safe and reliable load and voltage levels, startup capabilities after a shutdown and minimum load-carrying abilities.<sup>33</sup>

To ensure compliance with maintenance and operations standards, the contract may grant the utility the right to enter and inspect the facilities of the power supplier. The utility may invoke this right when other contractual provisions to assure reliable delivery of power fail or when the utility has reason to believe that the supplier may not be fulfilling its obligations.

Because operations and maintenance standards tend to be complex and burdensome, and the utility has some discretion in setting them, the utility has opportunities to discriminate between different power suppliers. If an affiliate, for example, happens to be a winning bidder, the utility may be more predisposed to set and enforce operations and maintenance standards more leniently than when an

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<sup>33</sup> Ibid., 69.

unaffiliated company is a winning bidder. This would be obviously inequitable because it reduces the cost of contract compliance to affiliates relative to nonaffiliates. An affiliate with the expectation of such favorable treatment may be able to reduce its bidding price relative to nonaffiliates, thereby having an unfair advantage in winning the bid. Once again, this may deprive ratepayers of being supplied by the truly lowest-cost source.

### Performance Security Bond

A contract will usually include a performance security bond to ensure timely construction of a power project, and to ensure reliable operation of the facility. The performance bond may take the form of an unconditional and irrevocable letter of credit by a bank. The amount of the performance security may include both the cost of replacement power (in dollars per kilowatt hour) and replacement capacity charge (in dollars per kilowatt). The performance bond may also include an indemnification clause for property and personal injury damages caused by the winning bidder due to any negligent, reckless, or intentional acts in fulfilling the contract.<sup>34</sup>

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<sup>34</sup> Ibid., 71.

As with other provisions of the contract, the utility may have some discretion of being more or less lenient with how a performance bond is to be executed or invoked. The utility may prefer a more lenient performance bond if an affiliate is involved. However, performance bonds generally have a standard form, and may not be subject to much variation. Therefore, the latitude available to the utility in executing performance bonds may not be significant enough to have any implications for self-dealing. To make the performance bonds fairly transparent and objective, the amounts can be set based on some market indices rather than the utility's own estimates or costs.

#### Liquidated Damages Provisions

A contract may also have liquidated damages provisions. Liquidated damages are a specific sum of money (or a formula which will result in a specific sum) that has been expressly stipulated by either party for a breach of agreement by the other. Liquidated damages, as distinct from property liens and performance bonds, are genuinely covenanted preestimates of damages, and not penalty clauses whose primary purpose is to secure performance.<sup>35</sup> Also, liquidated damages provisions apply only after the assets in question have been liquidated, in contrast to property liens and performance bonds, which may be invoked prior to liquidation.

Since liquidated damages are estimates, the utility may have significant discretion in setting them. The amounts set may vary from fairly lenient levels to punitive levels. The utility may prefer lenient terms for an affiliate and punitive terms for nonaffiliates. However, the problem can be addressed by setting the damages based on some market indices. In a tight bulk power market, such indices may result in a fair estimate of the liquidated damages.

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<sup>35</sup> Ibid., 73.

### Take-or-Pay Provisions

Contracts may also include take-or-pay provisions. Take-or-pay provisions obligate the utility to make payments even when committed purchases of power are not made. Take-or-pay provisions protect the supplier from demand risks and transfer such risks to the utility. There are two sources of demand risks. The first is a decline in customer demand below projections. The second is the availability of other sources of power at lower costs than that of the contracted supplier. The second type of demand risk may be called market or technological risk.

It is possible to argue both in favor and against take-or-pay provisions. One can argue that although neither the utility nor the supplier has any visible control over future customer demand, the utility, in making its demand forecast and determining its resource needs, must assume the main responsibility if the projected demand does not materialize. On the issue of market risk, neither the utility nor the supplier has any control or responsibility. However, one can argue that putting this risk on the supplier may be unfair because of its relative disadvantage in bearing this risk and the significant effect such risk-shifting may have on the financing costs of the supplier.

There are, of course, opposing arguments. Although the utility makes demand forecasts, the supplier has some ability to evaluate such forecasts or make its own projections. The supplier has the choice of not bidding or contracting for power based on its best assessment of future customer demand. Also, freeing the supplier from the burdens of the market risk may significantly reduce its incentive to be efficient and minimize costs. Given the growing competition in bulk power markets, there is little reason for any utility to enter into long-term take-or-pay obligations when power can be purchased at market prices as needed.

Overall, the arguments against take-or-pay provisions seem more persuasive. Particularly in the context of self-dealing, the utility should not be allowed to include take-or-pay clauses in contracts with affiliates because this may be construed as a cost discount at the expense of ratepayers.

### Cost-Escalation Clauses for Fuel and Construction Costs

Contracts may also contain cost-escalation clauses for construction or fuel costs. There is less reason to continue the practice of including construction cost-escalation clauses for either the utility or another supplier. Unlike demand and market risks, construction costs are not outside the control of the power supplier. To shift the risk elsewhere is to allow the supplier to earn an implicitly higher rate of return.<sup>36</sup> Worse still, construction cost-escalation clauses reduce the incentive to the utility to minimize costs and to be efficient in managing the construction project. Given the competitive context of the growing bulk power market, cost-escalation clauses lose whatever rationale they may have had in the era of traditionally regulated electric power sector.

There may be, however, some rationale for front loading or levelization of capital costs if the front loading is secured by a performance bond and bid prices are compared on the basis of levelized costs, taking into account the time value of money.

On the other hand, because fuel costs are not completely within the control of the utility or a supplier, there may be some rationale to periodically adjust payments for fuel costs. The FAC, which has become a standard appendage of utility regulation since the late 1970s, was introduced to address this issue. One undesirable feature of most FACs is that fuel-cost adjustments are based on the utility's own costs rather than some market or other independent index. In addition, a host of other operating costs, sometimes related to fuel costs and sometimes not, may be allowed to come under the purview of FACs. Such features of FACs tend to weaken incentives for cost minimization. Many analysts suggest reform of the FAC to improve cost-minimization incentives.<sup>37</sup> In particular, the incentive properties of FACs can certainly be improved if

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<sup>36</sup> Ibid., 75.

<sup>37</sup> See, for example, Robert E. Burns, Mark Eifert, and Peter Nagler, *Current FAC and PGA Practices: Implications for Rate-making in Competitive Markets* (Columbus, OH: The National Regulatory Research Institute, 1991).

fuel-cost adjustments are tied to some market index.

### Force Majeure Clauses

A force majeure clause in a contract excuses either party from performing the obligations of the contract when caused by "irresistible forces" beyond the reasonable control of either party. Circumstances under which the force majeure clause may be invoked include "acts of God," unusually severe weather conditions, labor strikes, riots, actions or omissions by government authorities that prevent performance, inability (despite good faith diligence) to obtain required licenses, accidents or fires.<sup>38</sup> Force majeure cannot be caused by negligence, failure to comply with the law, rule, order, or regulation. Other causes that cannot be used to invoke the force majeure clause include normal wear and tear, market conditions, governmental actions that affect the cost and the availability of fuel, unavailability of equipment, inability to obtain or renew permits, labor strikes or slowdowns after the date of commercial operation, or the failure of transmission or distribution arrangements made by the parties.<sup>39</sup>

A well-designed force majeure clause should adequately and equitably balance the risks among the utility, the ratepayer and the supplier.<sup>40</sup> Since there are obviously grey areas in defining circumstances under which the force majeure cause becomes applicable, the utility has opportunities to selectively shift more risks to ratepayers when an affiliate is involved than when the supplier is not affiliated with the utility. Such possibilities should be guarded against by appropriate commission oversight.

### Conclusions

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<sup>38</sup> Rose et al., *Implementing A Competitive Bidding Program for Electric Power Supply*, 75-76.

<sup>39</sup> *Ibid.*, 76.

<sup>40</sup> *Ibid.*, 76.

The resource planning and the resource acquisition processes offer the utility many opportunities for self-dealing. Although competitive bidding, compared to direct procurement, weakens such opportunities, the bid selection process and the post-bidding contracting still offer some opportunities to the utility for abusive self-dealing. The challenge for regulators is to improve the bidding process and explore other regulatory instruments to minimize the occurrence of abusive self-dealing.

## CHAPTER 3

### THE MERITS AND DEMERITS OF SELF-DEALING

Although this report focuses on the abuses arising from self-dealing, it is important to recognize, as mentioned elsewhere, that self-dealing is not without merits. Such merits may not be generally recognized presumably due to the necessary focus of regulators and analysts on the potential inefficiencies and abuses of utilities. It is, however, important to have a balanced view of both the beneficial and the detrimental aspects of self-dealing so that latent efficiencies of the self-dealing arrangement can be utilized while the attendant inefficiencies can be prevented. Such a perspective assumes additional significance in view of the growing competition in the electricity markets. The emerging competitive environment requires a reorientation from the restrictive approach of traditional regulation to a more facilitative and market-based approach. At the very least, it requires a reexamination of such regulatory policies as prohibiting the utility or its affiliates from a bidding process, given the fact that the new market environment may both limit the abusive aspects of self-dealing and utilize the latent efficiencies.

#### Merits of Self-Dealing Transactions

Self-dealing transactions have certain advantages. The advantages may depend on the management efficiencies of the utility and an affiliate, and potential economies of scope, coordination, and learning.

#### **The Utility May Be the Lowest-Cost Supplier**

A utility may, in fact, be more efficient in generating and supplying power than other suppliers. A utility generally has more management resources, better

access to fuel sources and equipment suppliers, and other resources than NUGs. In spite of such advantages, the utility may not perform efficiently because it is virtually immune from competitive pressures under the franchised monopoly arrangement. However, in a more competitive setting (such as a competitive bidding process or the threat of retail wheeling), the utility may be induced to better exploit its advantages, maximize its efficiency, and outperform other electricity suppliers. In this case, the ratepayers are better off with the utility generating and supplying its own power rather than procuring power from another supplier. This advantage would be foregone if the utility is precluded from supplying power on grounds of potential self-dealing abuses.

### **An Affiliate May Be the Lowest-Cost Supplier**

Alternatively, an affiliate of the utility may be the lowest-cost supplier of electricity. This could be true for a number of reasons. The management and the employees of an affiliate may be more driven by the profit motive than those of the utility. Also, compared to the utility, the affiliate may have better access to different and lower forms of capital, and more flexibility to adapt lower-cost capital structures.<sup>1</sup> Compared to other NUGs, the affiliate may have a better credit rating in the capital markets because it is supported by the credit and faith of the utility through the common parent company. In this case, case the ratepayers are better off if power is purchased from the affiliate rather than an unaffiliated supplier. This

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<sup>1</sup> Some analysts argue that a NUG does not have an advantage with regard to cost-of-capital and capital structures over a utility company. See Kenneth W. Costello, Edward H. Jennings, and Timothy Viezer, *Implications For A New PUHCA For the New Electric Industry and Regulators* (Columbus, OH: The National Regulatory Research Institute, 1992), 63-82.

benefit would be foregone if the affiliate is precluded or unduly disadvantaged as a potential supplier of power.

### **Economies of Scope, Coordination, and Learning**

One potential, economic benefit from self-dealing arises out of what economists call “economies of scope.” In the context of this report, economies of scope refer to the cost savings for utility operations when the power sold to retail customers is either produced by the utility itself or by an affiliated generator. What is called “economies of vertical integration,” or “economies of coordination” falls under the general category of economies of scope. Several factors can lead to these economies of self-dealing, all of which can be traced to synergy. One is the fact that affiliates tend to have similar or compatible management styles, administrative structures, operating procedures, and accounting practices. The presence of such commonalities may lead to economies of coordination. Another is the fact that affiliates tend to share information and technological know-how more freely than unaffiliated entities. The facilitation of information flows, and the sharing of knowledge in general, between seller and buyers when both are structured under the same parent company may produce economies of learning; knowledge of one activity, for example, may promote the efficient production of others. Yet another factor of economies of scope is the complementary relationship between generation and other functions of an electric power system. For example, generation and transmission may be less costly when provided jointly by one entity or by two separate entities under the same corporate ownership. An essential contributor of economies of scope is the use of common inputs in the production of two or more services. It should be said that while joint production (say, of generation and transmission) may be economical, this should not imply that the different services be produced by the same entity or entities of the same parent company. Separate firms operating under a contractual arrangement can also realize economies. Some empirical evidence exists supporting the existence of economies of scope in the electric

power industry.<sup>2</sup> Economies of scope, coordination, and learning can contribute efficiencies to the power procurement and generation process that may be otherwise unavailable. Under optimal regulation,<sup>3</sup> such efficiencies may translate into lower power delivery costs to the utility, lower rates to the ratepayer and generally lower resource costs to society.

### **Transmission Access**

If the utility were to obtain power from an outside supplier, the supplier needs to interconnect, either directly or indirectly (through a wheeling arrangement) with the utility. If the supplier is located in the utility's service area, there is no serious problem of interconnection or transmission access. One issue that may need to be addressed is whether the interconnection creates reliability problems. If the interconnection does not require any upgrading of transmission facilities, then no problems remain. Otherwise, the details of the necessary upgrade, and recovery of associated costs would have to be negotiated.

If, however, the generation facilities of the supplier are located outside the service area of the supplier, the issue of transmission access arises. The supplier then needs to gain access to the transmission facilities of intervening utilities through wheeling arrangements. By mutual agreement, either the utility or the supplier may take responsibility for securing transmission access. If the supplier is unable to gain such access, it obviously cannot deliver power to the utility.

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<sup>2</sup> Herbert G. Thompson, David Alan Hovde, and Louis Irwin with Mufakharul Islam and Kenneth Rose, *Economies of Scale and vertical Integration in the Investor-Owned Electric Utility Industry* (Columbus, OH: The National Regulatory Research Institute, 1996), Appendix C.

<sup>3</sup> In the present context, regulation may be defined as optimal if the utility's choices are purely driven by cost.

Intervening utilities would have an interest in denying transmission access to the supplier if they are competing for the same customers.<sup>4</sup>

It is obvious that if the host utility is supplying its own power, the issue of transmission access does not arise. Also, it is reasonable to conclude that if an affiliate is supplying power to the utility, the utility would have an interest and the leverage (perhaps through the parent company) to secure the necessary transmission access. The utility may also have a self-dealing motive in facilitating transmission access when an affiliate is involved as opposed to when the contracting party is a nonaffiliate. For example, if the utility takes responsibility for securing transmission access, it may choose not to put in a good-faith effort in negotiating transmission access, for an unaffiliated supplier, with intervening utilities. Even in the absence of self-dealing motives, it is likely that an affiliated supplier may have less difficulty in securing transmission access for other reasons: affiliates may locate their facilities with due consideration of transmission access to a utility, and either the utility or its parent company may be able to use its credit and faith to negotiate a good deal with intervening utilities. Therefore, the consideration of transmission access may predispose the utility to favor utility-owned generation or power procurement from an affiliate, for self-dealing motives or even for legitimate reasons. It is fair to say that transmission access is an issue that works in favor of self-dealing.

### **Weaknesses of the Regulatory Arrangement and Self-Dealing**

The benefits of self-dealing, mentioned in preceding sections, will be realized if the utility is induced to act in a way that serves the best interests of the ratepayer. However, the interests of any firm, whether regulated or unregulated, are not

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<sup>4</sup> Denying transmission access will be minimized in the future if the FERC exercises its authority to order wholesale wheeling. See Federal Energy Regulatory Commission, Notice of Proposed Rulemaking and Supplemental Notice of Proposed Rulemaking, Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities, Docket Nos. RM95-8-000 and Docket Nos. RM94-7-001, March 29, 1995.

necessarily congruent with those of their customers. In an unregulated market, competition usually provides the risk-reward structure and the underlying discipline that tend to align the interests of the firm with those of its customers. For a regulated firm, such discipline is expected to be provided by the regulatory arrangement. It is well known that such discipline is less effective in a regulated market, compared to a competitive unregulated market, because of two basic weaknesses of the regulatory arrangement.

The first weakness is the asymmetric risk-reward structure that tends to penalize poor performance (e.g., prudence disallowances) but offers only moderate rewards for exceptional performance (e.g., the profit constraint underlying ROR bounds).<sup>5</sup> The second, perhaps more relevant weakness in the context of self-dealing, is the informational asymmetry between the regulated firm and its ratepayers.<sup>6</sup> This arises due to the fact that the regulator may not be able to detect inefficient behavior by the utility and intervene accordingly because the regulator has limited access to information regarding the utility's needs, costs and effort. The regulatory mechanisms intended to oversee utility operations may not be well-designed to achieve the intended utility behavior. Also, the utility may have opportunities to circumvent even otherwise well-designed regulatory mechanisms.

Because of the above weaknesses, the regulated firm may not be induced to operate at its maximum achievable efficiency. Therefore, the firm may be not be motivated to exercise sound decision-making and sufficient diligence to minimize costs. The outcome may be inefficiency and higher than optimal costs for

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<sup>5</sup> In an unregulated, and competitive, market, there are no restrictions on either losses or profits. Therefore, the risk-reward structure is essentially symmetric. If the unregulated market is not competitive, however, then the risk-reward structure may be skewed toward the reward side for those with market power.

<sup>6</sup> Competition forces firms to align prices with marginal costs. Therefore, the truth-revealing property of a competitive market offsets the informational asymmetry between the firm and the consumer.

ratepayers. One form such inefficiency may take is abusive self-dealing, in which the utility favors utility-generated power or power purchases from an affiliate even when lower-cost sources are available.<sup>7</sup>

### **Demerits of Self-Dealing**

Self-dealing may potentially harm ratepayers and other stakeholders in several ways. Some of the ways in which self-dealing may be considered harmful and the underlying causes are discussed below.

#### **The Utility May Not Be the Lowest-Cost Provider**

This is presumably the most obvious source of potential harm to ratepayers. A large number of utilities in the country are burdened with costly excess capacity and high operating costs. If such utilities are allowed to generate their own power rather than purchase power from lower-cost suppliers, then ratepayers are being burdened with unnecessarily high rates. Any utility in this category would have a compelling reason to justify generating its own power to recover "stranded costs." However, it can certainly be argued that the so-called stranded costs are the result of poor investment decisions in the past and that utility investors rather than ratepayers should bear the burden of absorbing such costs.<sup>8</sup> Even if a utility is not

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<sup>7</sup> Other forms of inefficiency include poor management of construction projects, inadequate effort in finding low-cost fuel sources and negotiating fuel purchase contracts, and inefficient operation of generation plants.

<sup>8</sup> The FERC, in the so-called Mega-NOPR issued in March, 1995 (see Federal Energy Regulatory Commission, Notice of Proposed Rulemaking and Supplemental Notice of Proposed Rulemaking, Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities, March 29, 1995), addressed the problem of the recovery of stranded costs. For an examination of regulatory options to address stranded costs, see Scott Hempling, Kenneth Rose, and Robert E. Burns, *The Regulatory Treatment of Embedded Costs Exceeding Market Prices: Transition to A Competitive Electric Generation Market: A Briefing Document for State Commissions* (Columbus, OH: The National Regulatory Research Institute, 1994).

burdened with any significant stranded costs, it is still not obvious that the utility is the lowest-cost supplier of capacity and energy. In the era of vigorous wholesale competition that is anticipated to emerge, market forces will identify the low-cost and the more efficient supplier. If a utility's decision to generate its own power continues to receive some degree of regulatory sanction, and the corresponding assurance of cost recovery, it is quite possible that the benefits to ratepayers of receiving power from the lowest-cost source may be foregone.

### **An Affiliate May Not Be the Lowest-Cost Provider**

Even if the true costs of an affiliate are higher than other suppliers, the mechanisms used for resource selection and acquisition may be poorly equipped to reveal this fact. These mechanisms are not free from the risks of misrepresentation and circumvention, and therefore may inaccurately identify an affiliate as being the lowest-cost supplier. The result may be that ratepayers are receiving power from purportedly the lowest-cost source, or the "best" source (from a multi-attribute perspective), when in fact lower-cost or better sources of power may have been foregone.

### **Cross-Subsidization of Services or Customer Segments**

Two forms of inefficient cross-subsidization may take place under self-dealing. The first is the cross-subsidization of one customer segment by another. For example, if the utility is allowed to discriminate between core or "captive" customers (such as residential and small commercial customers with limited alternatives) and the noncore customers (such as large commercial and industrial customers with significant alternatives), it is likely that the utility may subsidize noncore customers with revenues from core customers. The noncore customers may be offered services at competitive rates (or even below competitive rates, to

undercut potential competitors), and the core customers may be burdened with rates as high as regulatory forbearance would allow. If the utility happens to be inefficient compared to alternative sources, the cost of inefficiency is essentially borne by the core customers. It should be noted that this form of cross-subsidization is germane to utility inefficiency in every form. For example, the utility may be able to overcome the adverse financial consequences of general investment and operational inefficiency, as well as inefficiency in resource acquisition in the form of abusive self-dealing (utility-owned generation or power procurement from an affiliate), by engaging in this form of cross-subsidization.

A second form of cross-subsidization takes place when the utility unduly favors an affiliate in resource acquisitions. While the utility's earnings and profits are regulated, those of the affiliate are not subject to the same regulations. Therefore, the utility may be able shift some of the costs of an affiliate to its own, regulated, operations. The subsidization of an affiliate's operations with revenues from the utility's regulated operations has been one of the persistent concerns that have occupied regulators for a long time. This form of cross-subsidization may also translate into the other form of cross-subsidization just mentioned; namely, inefficiently supporting a utility's competitive operations with revenues from the utility's monopoly operations.

### **Unfair Treatment of Competitors**

By its very nature, self-dealing abuse constitutes an unfair treatment of competitors. The unfair treatment of competitors may occur at two different levels. At the wholesale level, the utility may favor itself or an affiliate in its resource acquisition decisions. At the retail level, the utility may be able to subsidize its operations in more competitive market segments with revenues from its monopoly customers.

As mentioned, a utility can favor itself or an affiliate over other suppliers in making resource acquisition decisions and by manipulating performance standards

and payment terms in the contracting process. The outcomes may be (1) the utility or an affiliate is paid higher than its true cost in the contracting process and (2) other lower-cost suppliers are precluded from supplying power. The first outcome may translate into subsidization of the operations of an affiliate with revenues from the utility's monopoly operations. As a result, the affiliate may be able to use the excess revenues to support its more competitive operations, for example, in the retail generation markets. This gives the affiliate an unfair advantage over its competitors. The unfair treatment of the utility's and its affiliates' competitors is more obvious from the second outcome.

As discussed in the preceding section, the utility can also subsidize its operations in the competitive retail markets with revenues from its monopoly (captive) customers. This offers the utility an unfair advantage over other competitors in the retail market. One source of the subsidy that makes this possible is the utility's ability to earn a regulated return, part of which may be used to support the operations of an affiliate whose earnings are not subject to the same regulations.

Therefore, opportunities for self-dealing allows the utility and its affiliates to gain an unfair competitive advantage over others both in wholesale and retail electricity markets.

### **Conclusions**

Self-dealing power transactions have both merits and demerits, and the merits may be less recognized. The challenge of regulators is to exploit the potential benefits of self-dealing for the ratepayer, and yet, to restrain its abuses.

## CHAPTER 4

### SELF-DEALING TRANSACTIONS AND STATE COMMISSION REGULATION

The regulatory authority vested in state PUCs may allow it to intervene into both organizational and operational aspects of a utility's actions that have a bearing on self-dealing transactions. The organizational actions may include mergers and diversification. The operational actions may include resource selection and resource acquisition decisions that involve either the utility or its affiliates.

The regulatory authority that allows such intervention may be either direct or indirect. The direct authority may be derived from the state constitution or state statutes. Such authority may allow or require the state PUC to make determinations on the formation and operations of a utility subsidiary. Even when a PUC does not have direct authority over organizational actions of a utility, it can exercise implicit authority by requiring certain safeguards for ratepayer protection. Such authority, regardless of any PUC authority on the formation or operations of a subsidiary, may also allow or require the PUC to make determinations on transactions between the utility and a subsidiary, a parent company, or any other affiliate company.

A PUC may also have indirect authority to regulate the transactions between the utility and an affiliate. A PUC generally has authority to determine the prudence of any utility decisions regarding resource expansion or acquisition through either *ex ante* or *ex post* reviews. Such reviews, as well as other regulatory processes, may be used to regulate or otherwise affect self-dealing transactions.

### **Commission Authority Over Utility Diversification**

A state PUC may have a constitutional or a statutory authority to allow or prohibit the formation of a subsidiary by a utility.<sup>1</sup> The PUC may exercise this authority to protect and uphold what it may view to be the public interest. Utility diversification may involve reallocation of assets and/or joint costs, among the diversified entities. The PUC has an interest in ensuring that assets and capital are not unduly transferred to a subsidiary without appropriate compensatory arrangements. Another concern of the PUC might be whether the future operations of the subsidiary would be subsidized by revenues from the regulated operations of the utility. For both of the above reasons, the PUC may be inclined to either prohibit the formation of the subsidiary or condition its approval on compliance with certain requirements that apply to the diversification process, to the future operations of the subsidiary, and to future utility-subsidiary relationships. Such conditions may include guaranteed access to books and records, opportunity to review and/or approve (or disapprove) contracts between the utility and an affiliate.

### **Structural Separation or Divestiture**

The PUC may also require either structural separation or complete divestiture of an existing subsidiary. A commission may rationalize that it is concerned that the subsidiary was absorbing an inordinate amount of the utility's resources, leading to the deterioration of services to ratepayers.<sup>2</sup> A structural or functional separation means a separation of assets, capital, operations, and services such that there are no common or joint costs. A divestiture means, besides separation of assets, capital, operations, and services, a separation of ownership. If a commission does have a right to order

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<sup>1</sup> Robert E. Burns, Peter A. Nagler, Kay Pfister, and J. Stephen Henderson, *Regulating Electric Utilities with Subsidiaries* (Columbus, OH: The National Regulatory Research Institute, 1986).

<sup>2</sup> *Ibid.*

either structural separation or divestiture, it may also have a right to oversee the related processes to protect the interests of ratepayers in a way similar to the one discussed for the formation of a subsidiary. In particular, the commission may wish to ensure that the assets and capital of the utility are not divested to a subsidiary without appropriate compensatory arrangements.

### **Regulation of the Utility-Affiliate Relationship**

A state PUC also may have the authority to regulate utility-affiliate relationships. Many states have affiliated interest statutes that address such relationships. Some grant a PUC the right to examine transactions between the utility and subsidiaries and holding companies in the absence of arm's length negotiations. Many of the affiliated interest laws were enacted in the 1930s.<sup>3</sup> Such laws enable regulators to gain access to the books and records of affiliated companies, to obtain documentation of the costs of goods and services that a utility and its affiliated companies provide to each other, and to approve or disapprove contracts so that utilities will not be dealt with unfairly.<sup>4</sup>

Besides access to records and authority to review contracts, a PUC may also have authority to review the allocation of costs between a utility and its affiliates. Such review may take the form of examining accounting procedures as well as actual cost data. The goal of such examination would be to detect transfer pricing, cross-subsidization and risk shifting.

Transfer pricing may occur if a subsidiary or affiliate of the utility charges an above-market price for goods and services knowing that these increased costs will be passed through to ratepayers in the form of higher rates.<sup>5</sup> When two affiliated entities are both unregulated, transfer pricing is not normally a public interest issue, because

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<sup>3</sup> Burns, Nagler, Pfister, and Henderson, *Regulating Electric Utilities with Subsidiaries*.

<sup>4</sup> Douglas W. Hawes, *Utility Holding Companies* (New York, NY: Clark Boardman Company, Ltd., 1984), 4-42, 4-43, 10-2, 10-3.

<sup>5</sup> Burns, Nagler, and Pfister, *Regulating Electric Utilities with Subsidiaries*, 17-18.

the entities in question are free to engage in any kind of strategic pricing in their business interest. However, since regulated utilities are allowed to recover their costs, payments to unregulated affiliates become an issue. Several methods are used to detect transfer pricing. These methods can be grouped into three broad approaches: the market-price approach, the profit comparison approach and the utility rate-of-return approach. The market-price approach compares the price actually paid by the utility to an affiliated supplier with the price the utility could have paid to an unaffiliated supplier under similar terms and conditions. The payments to the affiliate are deemed reasonable if they are less than or equal to those paid to a nonaffiliate. The profit comparison approach makes a similar comparison of the affiliate's rate-of-return to similar firms in the same industry. Finally, the utility rate-of-return approach is a variant of the profit comparison approach that compares the affiliate's rate-of-return to the utility's rate-of-return.<sup>6</sup>

One of the outcomes of transfer pricing is cross-subsidization. A utility can use transfer pricing to subsidize the operations of an affiliate with revenues from ratepayers. One form of cross-subsidization would be a disproportionate allocation of common or joint costs to the utility. Another form of cross-subsidization would be utility payments to an affiliate that are higher than the "market" level.

Another concern of regulators would be whether a subsidiary might increase the utility's level of risk and, as a result, its cost of capital.<sup>7</sup> For example, an unregulated subsidiary may undertake a risky project with a potential for high profits that would not normally be undertaken by the utility. Such risk-taking by a utility subsidiary may have an adverse effect on the utility's cost of capital and consequently, on rates charged to ratepayers.

The survey (see Appendix) accompanying this report found that, except for

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<sup>6</sup> For a more detailed discussion of these approaches, see *Ibid.*, 101-83.

<sup>7</sup> *Ibid.*, 21.

seven states among the responding PUCs,<sup>8</sup> all state PUCs have the authority to approve, prohibit, or otherwise regulate self-dealing transactions.

### **Regulatory Processes that Affect Self-Dealing**

Every stage of the regulatory process, in the form of a regulatory procedure, may affect the disposition of self-dealing transactions in some way. A number of such procedures are discussed next.

#### **Review of Utility Resource Plans**

Review of utility resource plans is a traditional regulatory procedure that has been in practice for more than a decade. Typically, a utility develops a resource plan based on the projected demand for energy, and cost and performance characteristics of various resource options. Prior to the 1980's, a typical utility resource plan included a demand forecast, a generation plan that specified the mix of existing and future power plants and their projected operations, and associated transmission and distribution plans that specified network configurations, capacities and new hookups. Review of such plans were perfunctory and unobtrusive.

Beginning in the late 1970s, however, driven by the confluence of events generally characterized as "the energy crisis," regulatory review of resource plans became more incisive and meticulous. In addition to requiring the utility to consider energy conservation and other demand-side options in resource plans, the regulator also increased the level of scrutiny of the utility's proposed mix of supply-side resources. The new paradigm became known as "least-cost planning" and signified a more comprehensive view of resource costs and included, besides private costs incurred by the utility and passed on to ultimate customers, broader societal costs,

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<sup>8</sup> Survey responses were received from forty-five state PUCs.

such as environmental damage. Later, there was a realization that a single objective such as cost was neither precisely measurable nor the only objective to be pursued through a resource plan. The diversity of objectives required a more comprehensive label for the desired resource planning process and led to the use of "integrated resource planning" or IRP to characterize the process.

IRP has increasingly become the vehicle by which PUCs evaluate utility resource choices. On the supply-side, utility proposals to build or purchase capacity, or to generate or purchase power, including purchases from an affiliate, are judged in relation to overall IRP objectives. Generally, resource choices that involve self-dealing are subject to the same criteria, such as cost, reliability and environmental impact, as other options. In addition, self-dealing proposals may invite special attention and scrutiny from regulators. To support the IRP objective of cost minimization, regulators have increasingly adopted or encouraged competitive bidding.

The IRP process requires the utility to submit a resource plan, which includes the full range of demand and supply-side resources and accompanying analysis of resource costs and rate impacts. The resource plan may be subject to review by the PUC. The review can be either a stand-alone procedure or part of a rate hearing, a prudence review, a certification of convenience and necessity procedure, FAC hearing or any other regulatory procedure as long as the resource plan is material to the conduct of the procedure. The regulatory procedure in question generally allows various stakeholders of the utility to intervene and make representations on the merit of the resource plan and its projected impact on one or more of the stakeholders. The PUC, after making an evaluation of the submitted plan and taking into account various representations made by interveners, may approve or reject the plan, either in full or in part.<sup>9</sup> The PUC may also require the utility to make modifications and resubmit the plan for future review. If the plan contains either proposals for future power procurement arrangements, or requests for approval of completed power procurement transactions,

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<sup>9</sup> PUC review and approval of the resource plan is not required in all state jurisdictions.

the IRP process can approve, reject or otherwise condition the final dispensation of such proposals or requests. Therefore, the IRP process constitutes perhaps the most comprehensive regulatory instrument for overseeing power procurement arrangements, including self-dealing transactions.

### **Competitive Bidding**

As part of an IRP or otherwise, a utility may use a competitive bidding process. The competitive bidding process may be completely voluntary or required by the state PUC. The bidding process may vary among states. The level of PUC involvement in different stages of the bidding process may also vary.

Competitive bidding, as previously discussed, imposes some restraints on abusive self-dealing, in contrast to direct procurement. However, also as previously discussed, competitive bidding offers many opportunities for self-dealing. In particular, the specification of resource needs in an RFP, the design of the price and nonprice elements of the bidding procedure, the evaluation of bids and finally, the post-bidding contracting process can all be manipulated to unduly favor the utility or one of the affiliates. One particular challenge for regulators is to improve the bidding process to minimize abusive self-dealing.

## **Rate Hearings**

Rate-case hearings are perhaps the most widely used forum for evaluating power procurement decisions made by the utility. Rate-case hearings, which are primarily devoted to examining revenue and rate adjustment requests made by the utility, also evaluate how the power procurement choices made by the utility affect revenues and rates. PUC judgments on revenue requirements, cost allocations, and rate design need to take into account whether the utility's chosen power procurement options represent least-cost choices and whether other, lower-cost alternatives were foregone. Interveners are generally allowed to make representations on the cost, reliability, and rate impacts of the utility's chosen power procurement options. The PUC makes final determinations on revenue requirements and rates, after an evaluation of data and analysis submitted by the utility, and after taking into account representations made by interveners. In deciding revenue requirements and rates, therefore, the PUC also makes judgments on the power procurement options, which may include self-dealing transactions, made by the utility.

## **Certification of Public Convenience and Necessity (CPCN)**

If a given power procurement arrangement requires construction of a new facility or expansion of existing facilities, the arrangement is subject to a CPCN procedure. For example, if the utility is procuring power from a NUG, affiliated or unaffiliated with the utility, the utility may need to build new transmission lines or expand existing transmission capacity. The environmental and economic impact of the projected construction activity is reviewed in a CPCN proceeding. Various aspects of the power procurement arrangement, especially those that involve siting of facilities, may become subject to review by the PUC, as well as other state agencies. Therefore, the CPCN process constitutes a forum for deciding the dispensation of power procurement arrangements, including those that involve self-dealing.

## FAC Hearings

PUCs generally review, either *ex ante* or *ex post*, rules, standards, or actual expenditures, related to the automatic adjustments to rates caused by changes in fuel prices and other related components of a utility's operating costs. Obviously, FAC hearings address self-dealing when it involves utility-owned generation. Also, FAC hearings can be used to address adjustments to rates involving purchased power. When the purchased power in question is from a utility, the FAC hearing constitutes a review of a self-dealing transaction. Generally, the PUC is likely to scrutinize operating expenses involving self-dealing with more rigor than other expenses. Power procurement contracts may also contain fuel-cost adjustment clauses, which may be open to review by the PUC.

FACs are generally considered to have weak incentive properties for minimizing fuel and other operating costs.<sup>10</sup> Given the limited access of regulators to information about the utility and its affiliates, FAC hearings are often a perfunctory, after-the-fact, ratification of adjustments to a utility's fuel, operating and purchased-power costs. Therefore, compared to other regulatory proceedings, FAC hearings are a relatively weak restraint on potential inefficiencies of a utility's resource acquisition choices.<sup>11</sup>

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<sup>10</sup> See Chapter 2 for discussion of incentive properties of fuel adjustment provisions of a power purchase contract.

<sup>11</sup> One of the well-known cases of alleged self-dealing abuse in fuel procurement involved purchases of coal by Ohio Power Company (OPCO) from Southern Ohio Coal Company (SOCCO), both subsidiaries of American Electric Power Company (AEP), in 1971. In 1982, FERC ruled that OPCO paid SOCCO a higher price for coal than OPCO could have paid an unaffiliated company.

## Prudence Reviews

The prudence review is one of the best-known instruments of traditional regulation to detect obvious instances of inefficiency and mismanagement. In the past, *ex post* prudence reviews have been used to disallow significant parts of utility investment in plants and facilities from the rate base. This particular form of regulatory action, constituted perhaps the most significant restraint on one form of self-dealing abuse, namely inefficient utility-owned generation.

Prudence reviews can be used also to review purchases of capacity and energy by a utility. If the supplier in question is a utility affiliate, the prudence review is likely to be more meticulous, in detecting the absence of arm's length dealing in any part of the acquisition process. As in utility-owned generation, the prudence review may be an effective restraint on self-dealing abuse involving utility affiliates.<sup>12</sup>

In spite of its effectiveness to deter inefficiencies in resource acquisition, particularly self-dealing abuse, some may consider the *ex post* prudence review as unduly intrusive on the utility's decision-making process in the emerging era of vigorous competition. It is now standard wisdom to say that although the prudence review does protect ratepayers from the harm of utility inefficiencies, it does not necessarily encourage efficiency. The prudence review inhibits risk-taking, entrepreneurship and innovation, characteristics that are particularly desirable in the emerging competitive environment.

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<sup>12</sup> Some analysts argue that the *ex post* prudence review is not an effective restraint against self-dealing abuse. See Testimony of Scott Hempling, Attorney, Energy Project Environmental Action Foundation Before the Committee on Energy and Public Utilities, California Senate on Utility-Affiliate Relations in the Electric Industry (SB 769), December 14, 1989.

## Management Audits

The periodic management audit is another tool a PUC can use to monitor and detect instances of self-dealing abuse. The management audit can be used to provide information and otherwise support other regulatory procedures, such as FAC hearings and prudence reviews. Forms of the management audit include (1) the comprehensive audit, (2) the reconnaissance audit, (3) the fuel procurement practices audit, (4) the executive management audit, and (5) the affiliated transactions audit.<sup>13</sup>

Comprehensive audits try to uncover inefficient management and inappropriate expenditures in all aspects of a utility's operation. The broad scope of such audits may be beneficial in discovering major flaws in any part of a utility's management. More focussed audits may be conducted subsequently to find problems in areas already identified by the comprehensive audit. However, the comprehensive audit may not be the most cost-effective way of identifying specific sources of utility inefficiency.

An alternative form of audit is the reconnaissance audit. The reconnaissance audit has the same comprehensiveness of scope as the comprehensive audit, but does not scrutinize any single area with as much depth. If the reconnaissance audit is well-designed enough to assure that no major problem area will go undiscovered, it is a more cost-effective substitute to the comprehensive audit.

The fuel procurement audit and the executive management audit represent focused audits in specific areas. The fuel procurement audit can be used to detect inefficiencies in the utility's fuel procurement decisions. The management audit can be used to evaluate the use of managerial time in utility and nonutility activities. Both can provide useful information pertaining to self-dealing abuse.

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<sup>13</sup> Burns, Nagler, and Pfister, *Regulating Electric Utilities with Subsidiaries*, 114-16.

Affiliate transactions audits provide the most direct means of detecting self-dealing abuse. In particular, an affiliate transactions audit can examine the allocation of common and joint costs between the utility and an affiliate. This involves the review of both the accounting methods and the actual cost data.

Although the management audit can uncover major instances of utility inefficiency and mismanagement, it has certain drawbacks. A major one is that management audits are labor-intensive and costly. A PUC may not have adequate resources to perform the audit and, instead, may have to hire outside consultants. Finally, although the management audit may be able to discover major problems, minor problems whose cumulative effect is not negligible, may go undiscovered.

### **Current Status of Commission Regulation of Self-Dealing Transactions**

The current status of commission regulation of self-dealing transactions was investigated through a survey. The survey results are summarized in the following sections and are presented in more detail in the Appendix.

#### **Issues Investigated**

The survey investigated seven broad areas. They include (1) PUC authority over utility diversification, (2) PUC authority to regulate utility affiliate transactions, (3) regulatory policy or procedures to oversee self-dealing transactions, (4) past PUC actions on self-dealing proposals, (5) survey respondent's view of self-dealing transactions, (6) PUC responses to EPart provisions of self-dealing transactions, and, finally, (7) survey respondent's view of anticipated future PUC position on self-dealing transactions.

**Summary of Responses**

According to the survey (Table 4-1), twenty-five states do not have direct regulatory authority over utility diversification. Fourteen states have authority over establishment of affiliates, fifteen have authority over utility operation and fourteen have authority over utility divestiture. As interpreted by survey respondents, thirty-eight state PUCs have authority to regulate self-dealing transactions. The authority may be direct, such as access to books and records and the authority to review and approve/disapprove contracts, or indirect, such as the authority to disallow recovery of imprudent costs.

<b>TABLE 4-1</b> <b>COMMISSION OVERSIGHT AUTHORITY OVER</b> <b>UTILITY DIVERSIFICATION AND</b> <b>UTILITY-AFFILIATE TRANSACTIONS</b>	
Type of Authority	Number of States with Authority
Establishment of An Affiliate	14
Operation of An Affiliate	15
Divestiture of An Affiliate	14
Utility-Affiliate Transactions	38

Source: 1995 NRRI Survey results, see Appendix.

The survey found (Table 4-2) that none of the responding commissions have a general policy of granting unconditional approval of self-dealing proposals. Eight commissions approve self-dealing proposals subject to future review of actual transactions. Twenty commissions approve self-dealing proposals if certain criteria are met, and the proposals are also subject to future review of actual transactions.

The survey found that self-dealing proposals came before twenty-three state commissions. However, only six state commissions approved all proposals, thirteen state commissions approved only some of the proposals, and one state commission did not approve any proposals. Among these state commissions, only two, namely Michigan and New York, issued rulings that specifically state the merits and demerits of self-dealing.

TABLE 4-2 GENERAL POLICY OF STATE COMMISSIONS REGARDING SELF-DEALING TRANSACTIONS	
Policy	Number of States
Unconditional Approval	0
Approval Subject to Future Review	8
Approval Subject to Criteria and Future Review	20
Unconditional Rejection	1
Other	16

Source: 1995 NRRI Survey results, see Appendix.

The survey (Table 4-3) found that the most commonly used regulatory procedures to review self-dealing transactions were general rate cases (thirty states) and prudence reviews (sixteen states). FAC hearings, IRP hearings, preapproval procedures, and other procedures are also used to review self-dealing transactions.

TABLE 4-3 REGULATORY PROCEDURE TO OVERSEE SELF-DEALING TRANSACTIONS	
Procedure	Number of States
General Rate Case	30
Prudence Review	16
FAC Hearings	3
IRP Hearings	9
Preapproval	5
Other	17

Source: 1995 NRRI Survey results, see Appendix.

The survey (Table 4-4) found twenty-eight states have competitive bidding procedures in place. Almost all of these states also allow directly negotiated procurement from a nonutility supplier. Nine states exclude the host utility from bidding and six states exclude utility affiliates from bidding. Three states prohibit direct procurement from an affiliate.

The survey found that commissions in the District of Columbia, Idaho, North Carolina, South Dakota, and Wisconsin ruled on a self-dealing proposal involving an EWG since the enactment of EAct.<sup>14</sup> Only one state, namely Georgia, articulated a position in response to EAct. Georgia amended its IRP rules pursuant to section 711 of EAct.

TABLE 4-4 POWER PROCUREMENT MECHANISMS	
Competitive Bidding	28
Direct (Sole-Source) Procurement*	26
Prohibits the Utility from Bidding	9
Prohibits Utility Affiliates from Bidding	6
Prohibits Direct Procurement from Affiliates	3

\* Most states that allow direct procurement also have competitive bidding rules in place. Most states that do not have competitive bidding in place would consider or accept competitive bidding proposals from utilities. (Source: 1995 NRRI Survey results, see Appendix.)

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<sup>14</sup> Section 711 of EAct states that PUCs have authority over power sales involving affiliated EWGs. Section 711 also requires a PUC to do a case-by-case review of self-dealing proposals to address whether self-dealing would benefit consumers, is in the public interest, does not violate state law, and would not give an affiliate EWG an unfair competitive advantage.

The survey found that most respondents did not have an opinion on the benefits or harm associated with self-dealing transactions. Three respondents indicated that they recognize benefits from self-dealing transactions, while four others indicated that they do not recognize any such benefits.

The survey found that only three commissions, namely Georgia, Michigan, and New Hampshire, have changed their policy in the past with regard to self-dealing. Most of the commissions do not have a general policy regarding self-dealing, and therefore, the occasion to change the policy did not arise. Respondents from ten commissions, however, expect a change in policy in the future.<sup>15</sup>

### **Cases of Self-Dealing Abuse Brought before State Commissions or FERC**

A number of cases alleging self-dealing abuse by utilities were brought before state commissions or the FERC. Some of these cases are discussed briefly.<sup>16</sup>

### **Self-Dealing in Power Transactions**

#### **Southern California Edison**

In 1990, the proposed merger of Southern California Edison (SCE) and San Diego Gas and Electric (SDG&E) invited allegations of self-dealing abuse.<sup>17</sup> Opponents of the merger argued that SCE was engaged in abusive self-dealing with

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<sup>15</sup> Some of these respondents expect their commissions to enact policies where none exists now.

<sup>16</sup> The list of cases discussed is not intended to be exhaustive, and the discussion of an individual case is not intended to be complete or up to date. The purpose of the discussion is to outline the possible forms of alleged abuse in the cases brought before regulatory agencies.

<sup>17</sup> See Dan Seligman, "Self-Dealing Raised in Edison Merger," *The Electricity Journal* 3, No. 6 (July 1990): 8-10.

one of its affiliates, Mission Energy. The California Public Utilities Commission staff accused SCE of favoritism toward Mission Energy in negotiating and enforcing power purchase contracts from cogeneration and enhanced oil recovery plants partially owned by Mission Energy. As a condition for merger, SCE reached an agreement with the U.S. Department of Justice that the proposed merged utility would not enter into purchased power contracts with affiliates unless prior approval was obtained from the CPUC. The merger proposal was ultimately rejected by FERC and withdrawn by the parties.<sup>18</sup>

### **Consumers Power**

Consumers Power Company has gone through a long series of litigations involving its power purchases from one of its affiliates, Midland Cogeneration Venture (MCV). Consumers had earlier sold an abandoned nuclear power plant to MCV. On August 14, 1987, Consumers signed a power purchase contract with MCV at a price of 4.15 cents per kilowatthour. The Michigan Public Service Commission (MPSC) issued an interim order on January 31, 1989, declining to approve the MCV contract. In that order, MPSC cited non-arm's-length bargaining, inappropriate self-dealing, risks to ratepayers, unjustified capacity forecasts, differences between contract terms for MCV and for other power suppliers and *ex parte* communications as reasons for its refusal to approve the contract. The MPSC directed Consumers to contract with a variety of projects offering firm commitments, fuel diversity, long-term reliability, and with prices at or below the avoided cost of 3.77 cents per kilowatthour.<sup>19</sup>

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<sup>18</sup> Ken W. Costello, Edward H. Jennings, and Timothy W. Viezer, *Implications of A New PUHCA for the Electric Industry and Regulators* (Columbus, OH: The National Regulatory Research Institute, 1992), 49.

<sup>19</sup> The case continued to be litigated after the MPSC interim order. See Testimony of Scott Hempling, Attorney, Energy Project Environmental Action Foundation Before the Committee on Energy and Public Utilities, California Senate, on Utility-Affiliate Relations in the Electric Industry (SB 769), December 14, 1989. See also, "Another No to Consumers Power," *The Electricity Journal* 5, No. 3 (May 1992): 6,7, and Michigan Public Service Commission, *Opinion and Order. Case No. U-8871 et al and Case No. U-10127*, March 31, 1993.

### **Tucson Electric Power**

There were allegations of self-dealing abuse against Tucson Electric Power (TEP) for its dealings with one of its subsidiaries, Alamito Company. In 1983, TEP sold two generating units to Alamito. TEP then entered into a purchased power agreement with Alamito at price based on Alamito's equity ratio of 43 percent.

In 1984, TEP decided to spinoff Alamito as an independent wholesale power company. Although at the time of the spinoff, Alamito's equity ratio was 18 percent, the power supply agreement was continued to be priced at the original equity ratio of 43 percent. The agreement was amended in 1985 and the equity ratio in the pricing formula was reduced to 30 percent. In 1986, Alamito was sold to Catalyst Energy Corporation at a sales price that was 232 million dollars higher than at the time of the spin-off. TIEP later sought to terminate the agreement with Alamito's new owners but opted to amend the agreement to reduce the amount of electricity to be purchased. The Arizona Corporation Commission (ACC) staff recommended a 50 percent sharing of TIEP's gain from the sale with ratepayers. The hearing officer at the ACC, however, recommended a downward adjustment to the test year operating expenses of \$32,592,295. The hearing officer observed that the spin-off of Alamito without amending the twelve-year power sales agreement was an imprudent business decision.<sup>20</sup>

### **Self-Dealing involving Other Products**

A number of self-dealing cases were brought before regulatory agencies involving purchases of fuel and other products. Utilities involved in these cases

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<sup>20</sup> See Testimony of Scott Hempling, Attorney, Energy Project Environmental Action Foundation Before the Committee on Energy and Public Utilities, California Senate, on Utility-Affiliate Relations in the Electric Industry (SB 769), December 14, 1989.

include Ohio Power (coal), Public Service Company of New Mexico (coal), Montana-Dakota Utility Company (coal), Columbia Gas System (gas), and Sierra Pacific Power Company (real estate).<sup>21</sup>

### Summary

State commissions vary with regard to regulatory authority, policies and procedures which can be used to restrain, or materially affect, self-dealing transactions. State commissions have opportunities to intervene at many different stages of the self-dealing transaction, from the formation of an affiliate to the final determination of cost recovery.

In the past, a number of cases of alleged self-dealing abuse were brought before state PUCs and the FERC. An examination of such cases show that many opportunities of potential self-dealing abuse exist in spite of safeguards embedded in regulatory policy and practices.

The next chapter discusses ways in which existing regulatory mechanisms as well as new market-oriented regulatory approaches can be used to mitigate self-dealing abuse and to utilize potential efficiencies of the self-dealing arrangement to the ratepayer's benefit.

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<sup>21</sup> Ibid.