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This article gives insight from over 20 years of experience reviewing many different types of formula rates utilized by a number of different utilities. Formula rates are here to stay for the foreseeable future, so being prepared to deal with them technically, economically and systematically when they arise will be the focus of this series of articles.

Economic Impact Analysis... A Useful Tool for Strategic Decision Making - Pages 5

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When faced with a major capital or operating cost decision, have you ever tried to measure the true economic consequences of the decision on your local economy? In order to quantify such a situation, you would have to perform an economic impact analysis using input/output modeling. This article discusses these useful analytical tools you can add to your arsenal for strategic management and decision making.

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Part I: Wholesale Formula Rates: *BOON* or *BANE*?

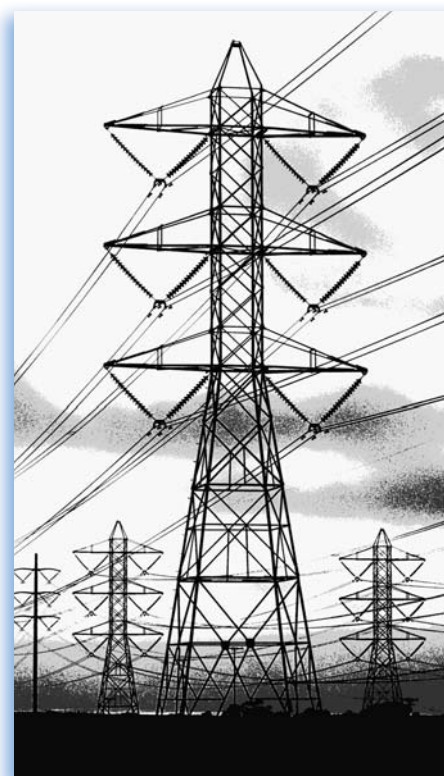
Formula rates applicable to wholesale services, including transmission, ancillary and power services, are becoming quite popular. Many transmission owners ("TO") in both RTO and non-RTO regions are filing formula rates for transmission services to replace stated rates within their Open Access Transmission Tariffs ("OATT"), and this transformation comes with the encouragement of the Federal Energy Regulatory Commission ("FERC" or "Commission"). Similarly, formula rates for wholesale power sales, although not as numerous so far, are becoming more common. This shift from stated rates (*i.e.*, specific fixed charges), which may be changed only by an appropriate filing with the Commission, to formula rates, where the FERC-approved formula is the rate and costs are automatically flowed through the formula and corresponding charges redetermined from year to year, is ostensibly for the following reasons:

- (i) to facilitate prompt recovery of costs in an escalating cost environment;
- (ii) to encourage construction of needed infrastructure (*e.g.*, transmission facilities);
- (iii) to reduce regulatory risk; and
- (iv) to avoid costly periodic rate filings, and the corresponding rate suspensions that may be ordered under the Federal Power Act ("FPA").

Because the Commission is encouraging the use of formula rates, as manifested in its recent transmission incentives pricing statement, the probability, under the current regulatory environment, of successfully challenging and avoiding the use of a formula rate design altogether is low to nil. Accepting *arguendo* that formula rates are inevitable for the time being, the question becomes how to react and respond in a formula rate world. Before answering this question, however, the stated rate environment needs to be compared and contrasted with the formula rate environment to better understand the ramifications of this paradigm shift.

Accepting *arguendo* that formula rates are inevitable for the time being, the question becomes how to react and respond in a formula rate world.

With stated rates the seller of services (*e.g.*, a TO) must file specific charges with the FERC, normally under the FPA § 205 rate change provisions, and secure approval of such rates. Generally, FPA § 205 filings require a minimum 60-day notice period before the rates can become effective, and the Commission may suspend the effectiveness of the rate for as little as one day or as much as five (5) months. This maximum suspension is imposed when the Commission's Office of Markets, Tariffs and Rates determines, based on a preliminary review of the filing, that the requested rate change (increase) is excessive by more than ten percent (10%). This is referred to as the *West Texas* rule (*West Texas Utilities Co.*, 18 FERC ¶ 61,189 (1982)). If the requested



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rate change is suspended, whether for a nominal one day or the maximum five months, the rate change is allowed to go into effect subject to refund with interest applicable if a lower rate and refunds are eventually ordered.

The Commission's regulations (18 C.F.R. §35.13) require that most stated rate filings be supported with detailed Period I (historical) and Period II (projected) cost-of-service documentation conforming to specific standards relating to timing and detail. Interested parties may intervene and protest stated rate filings. When a stated rate filing is protested, the Commission may either summarily resolve the items of dispute in an initial order or, alternatively, set the rate change for hearing, thus giving intervenors the opportunity for discovery and presentation of evidence in opposition to the requested rate change. Moreover, in recent years, the Commission has relied heavily on the settlement process by requiring the filing utility, intervenors and FERC trial staff to engage in settlement discussions before a settlement judge prior to setting the matter for hearing before a trial judge (who cannot be the settlement judge). During this informal settlement process, limited discovery is typically allowed to permit the intervenors and staff to vet the utility's filing. This process can last as little as a few weeks or as long as a year or more, depending on the parties' progress toward a negotiated resolution.

If no settlement is reached, a hearing will take place before a trial judge, who will issue an initial decision ("ID") on the merits regarding the issues presented at hearing. The typical litigation track of a Section 205 rate filing before the Commission is approximately 32 weeks from the appointment of the trial judge to hearing, and approximately eight weeks thereafter for the trial judge to issue the ID. If exceptions to the ID are raised by any party or FERC staff, which is typically the case, the Commission will review the record and render an order or opinion on the contested issues. Thereafter, any dissatisfied party may seek rehearing of that order/opinion, and eventually file an appeal in the courts if there are legal grounds to do so.

The critical things to take away from the stated rate process are that:

- (i) **the rate does not change without a filing;**
- (ii) **specific supporting documentation is required to be filed in support of each requested stated rate change;**
- (iii) **affected customers are provided an opportunity to challenge the change in rates;**
- (iv) **customers are protected against excessive charges, if determined by the Commission, by receiving refunds of overcharges with interest, and**
- (v) **there is ample opportunity for adjudication and settlement.**

Each subsequent rate change requires a filing and the justness and reasonableness of each proposed stated rate change is subject to the above-described adjudicatory process. The data (e.g., investments, expenses and loads) upon which the filing utility bases each stated rate change

are subject to both customer and Commission scrutiny. Costs are not automatically recovered.

In contrast, when a utility makes a filing seeking to implement a formula rate, the Commission quite often, particularly in the case for transmission formula rates, does not require the filing utility to file all of the detailed historic and projected filing statements set forth in the filing regulations under 18 C.F.R §35.13. Also, when a utility is allowed to adopt a formula rate design, the formula itself becomes the rate, and the unit charges produced by the formula rate are periodically automatically updated, typically annually, with more current data. There is no minimum 60-day notice requirement before the charges can be changed; there is no risk of suspension of the change in the effectiveness of the revised unit charges to the extent they might be excessive. **The formula rate that produces the unit charges, once approved by the Commission, is presumed to be just and reasonable, and, therefore, to produce just and reasonable unit charges.**

Two circumstances typically arise as the formula operates to produce new, adjusted charges over time. **First**, the filing utility may misapply data to the formula, thus producing an improper charge to its customers. **Second**, the formula itself may become unjust and unreasonable for a number of reasons, such as something as typical as a change in a company accounting practice or Commission policy.

With respect to the former, since **"the formula is the rate"** only the correctness of the application of the formula rate can be challenged, much like a challenge to an automatic fuel and purchased power adjustment clause, another form of formula rate. Such a challenge might be filed under FPA §206 or §306. This type of challenge might raise issues such as whether the formula has been correctly followed, mathematically applied correctly, or the underlying data have been correctly accounted for and incorporated into the components of the formula rate. Such challenges may look back at the historical application of the formula rate and raise issues where warranted. The Commission may then accept such a complaint for review but require use of the settlement process described above before commencing a hearing on the merits. A properly initiated challenge to the application of a formula rate may permit refunds dating back to the first misapplication of the filed rate, with interest pursuant to the Commission's regulations. It is important to note that the right to hearing is by no means automatic; the Commission has previously rejected such complaints outright due to lack of support filed by the aggrieved customer.

A different type of challenge pursuant to FPA §206 would be required to seek to change an established formula rate. So as not to offend the filed-rate doctrine, generally a challenge seeking a change to a formula rate (not the charges produced by the formula rate) would be prospective in nature, with refund protection no earlier than the day after the date of filing the complaint with the Commission and no later than five months after. A provider of services, likewise, would have to make a filing under FPA §205 to seek authorization to change a formula rate (as opposed to the

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automatic changes in the unit charges produced by the formula) or to replace a formula rate with a stated rate.

When faced for the first time with the prospect of paying for services under a formula rate, the ratepayer should carefully consider how to respond and what types of formula rate structure, administrative protections and rights should be incorporated in a formula rate. **First, an affected customer should participate to the fullest extent in any proceeding involving the establishment of a formula rate.** One should never assume that the Commission has the resources or depth of knowledge as to the service provider necessary to scrutinize and evaluate thoroughly the design of a formula rate and the accompanying implementation procedures, if any. Also, based on recent filing acceptance orders involving formula rates, the Commission effectively is deciding more and more issues at the filing stage based solely on the utility's filing and the intervenors' protests.

Second, given that a formula rate will automatically flow through changes in costs, it is not sufficient to evaluate a proposed formula rate based solely upon what you know today or what the utility submits in support of the formula rate. A formula rate filing often includes data for a test period to illustrate the mechanics of the formula rate. The data filed with the Commission, however, may not be and often are not sufficiently detailed to allow a satisfactory review of the underpinning current costs. Discovery and substantive analysis is crucial to understanding the filing utility's accounting practices and the core details as to how costs are being recorded and what comprises those costs.

Third, it is not sufficient to focus only on today's environment when evaluating a formula rate. It is imperative that such evaluation anticipate changed circumstances (e.g., participation in or interaction with a regional transmission organization – "RTO" – which will assuredly have implications as to formula rates; and changes in the filing utility's circumstances, such as evolving construction programs). Since costs will be flowed through automatically, it is crucial to anticipate how the future cost landscape could affect a formula rate and how, for example, to design the formula rate to avoid certain pitfalls. And, it is not sufficient to focus only on the current "big ticket" items in a formula rate, because what may be an item of limited cost implication today could swell to be a large item tomorrow. This is especially true with regard to items such as accumulated deferred income taxes ("ADIT"), which may be either an addition to or deduction from rate base under a formula rate, depending on the nature of the underlying tax timing difference. Also, several individually small items collectively may have a more significant impact on the results of the formula rate. **One can never know enough about the utility that employs a formula rate.** It always has a decided advantage because it is the repository of all relevant information; the information availability playing field is sloped heavily in favor of the proponent of the formula rate.

Fourth, it is vitally important that the customer facing the implementation of a formula rate be aware of the Commission's ratemaking policies and precedents, including specific cases that set forth well-established ratemaking principles and procedures. Many such policies and precedents are longstanding, but new ones and revised ones are occurring regularly. For example, given the highly subjective nature of the determination of a just and reasonable return on

common equity, the Commission's policies are constantly evolving. Other items such as the treatment of post-retirement benefits other than pensions ("PBOPs") have similarly evolved in recent years. Being aware of the Commission's most current ratemaking principles is essential for evaluating a proposed formula rate for consistency with such policies and precedents.

Fifth, it is not until you have had the opportunity to experience formula rate updates that you can develop a real appreciation of the types of things that can be encountered – both inadvertent outcomes and intentional actions that directly influence the new charges determined by the formula rate. Several real world examples will help to better appreciate this point. Without any filing to change the formula itself, one major utility holding company transferred approximately \$200 million of distribution plant to transmission plant after the implementation of a transmission formula rate. This was done in the last month of a calendar year and the effect went unnoticed until the subsequent annual update because the formula rate utilized a 13-month average rate base for plant, so the effect in the first affected year was relatively small. Another major utility with power sales formula rates decided to change its accounting to re-functionalize certain production-related operation and maintenance ("O&M") expenses historically booked to administrative and general ("A&G") expenses by booking those expenses directly to production O&M accounts after the implementation of a formula rate. Again, this occurred without change to the formula. The result was

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that 100% of those costs were picked up as production costs under the formula rate after the accounting change, while only a labor-ratio based share were assigned to production when previously booked to A&G expense. The change was not in and of itself wrong, but created a blatant inconsistency with the prior operation of the formula. The problem was that similar distribution-related and transmission-related expenses booked to A&G expense were left unchanged, thereby causing a large share of those expenses also to be allocated to the production function based on the use of labor ratios. These are but two examples out of dozens that have arisen in routine reviews of annual formula rate updates conducted by GDS on behalf of its clients. Customers must be ever vigilant.

Sixth, most formula rates are built around FERC Form No. 1 reported information, supplemented with more detailed accounting data when not found in the Form No. 1. The Commission is constantly changing the form of the schedules contained in the Form No. 1 as well as the overall content. Simple reporting changes can affect the way a formula rate works relative to how it was intended to work when initially adopted and before such reporting change. Such subtleties can make a difference in what a customer may pay under a formula rate. Likewise, the Commission from time to time issues accounting directives that interpret and change the application of the FERC's Uniform System of Accounts. Such directives can have direct and pronounced effects on the operation of a formula rate. The lesson to be taken from these exogenous factors is that the framework within which formula rates are applied is constantly changing, thus one must stay keenly

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aware of this dynamic environment, lest he pay more than is justified.

Care should be taken not to deceive one's self into thinking that with a formula rate, the costs and trouble associated with periodic involvement in rate cases where stated rate changes are sought can be avoided. Yes, those rate cases go away. But they necessarily are replaced by the review of the annual formula rate updates to be sure that the automatic flow through of costs does not become an avenue for systematic over charging and abuse. There is a cost to conducting one's business in a prudent fashion, and not being lulled into accepting whatever charges flow from a formula rate as representative of your provider's cost.

Will you always find a major bust or intentional effort to manipulate the operation of a formula rate? No. But our experience over the past twenty (20) years of reviewing many different types of formula rates utilized by a number of different utilities is that the cost of the effort over the long haul more than pays for itself in reduced charges. Plus, it is just good business. We do not blithely accept what the bank says our account balance should be. We review our statements and reconcile our records with the bank statement. The same type of review is warranted where formula rates are used for services purchased by our utility clients. Formula rates are here to stay for the foreseeable future, so we should make the best of the situation by preparing ourselves to deal with them technically, economically and systematically when they arise.

Part II in the next issue will address the need for and proper design of implementation procedures, often referred to as protocols, to define and protect the customer's rights with regard to the use and administration of formula rates.

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Note: The review and insightful comments of Cary Cook, Senior Project Manager at GDS, and Craig Silverstein, a partner in the law firm of Miller, Balis & O'Neil, P.C. in Washington, D.C., each of whom also have been in the trenches dealing with the shift to, development and monitoring of formula rates, are greatly appreciated.

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increase in price of electricity. Typical experience is that electricity is price inelastic, meaning a 1% change in price will cause less than a 1% change in energy consumption. That means electric bills will generally go up (unless there are offsetting energy efficiency measures installed), leaving less income available for personal consumption of other goods and services. This net effect can be measured for both residential and commercial accounts.

Input/output analysis can be a useful tool in analyzing capital and operating budget decisions. It can be a high-level analysis to provide indicative results, or a detailed analysis aimed at providing reliable estimates of actual economic impacts. **Either way, consider it as another analytical tool you can add to your arsenal for strategic management and decision making, especially when you are faced with building support for a particular direction you wish to go.**

For more information or to comment on this article, contact Jacob Thomas at 770.425.8100 or email: jacob.thomas@gdsassociates.com



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Economic Impact Analysis... A Useful Tool for Strategic Decision Making



When faced with a major capital or operating cost decision, have you ever tried to measure the true economic consequences of the decision on your local economy? Unless you work for a government, regulatory agency or other public advocacy group, you probably have not. Rightfully so, I might add, since your responsibility lies in making the optimal decision for your company. However, such an impact assessment on how a decision affects the local or state economy might be **useful in defending a case before a regulatory body or in the area of marketing.** As an example, suppose your utility is considering construction of a power plant in-state. The construction and operation of the plant will have compound value in terms of economic activity and job creation attached to it. If you find the need to build a case in support of this decision, a quantifiable impact on economic activity is a nice card to hold in your hand.

In order to quantify such a situation, you would have to perform an **economic impact analysis** using input/output modeling. **Input/output analysis** is a means of examining relationships within an economy, both among businesses and between businesses and final consumers. A mathematical model of a local economy is developed that captures all monetary market transactions for consumption in a given period of time. A **descriptive model** of a local economy would capture in-region business transactions, transactions with out-of-region entities, and non-industrial transactions such as payment of taxes (called Social Accounting data). The descriptive model is used to construct multipliers that are incorporated into a predictive model.

The **predictive model** is used to determine the impact on the local economy of a dollar change in final demand for a given industry. Industries providing goods and services purchase goods and services from other producers, who also purchase goods and services. This cycle of activity continues until leakages from the region (such as wages, imports, profits, etc.) stop the cycle. The additional economic value associated with the cycle is called the indirect effect of the change in demand. Furthermore, a predictive model can

measure induced effects, which are impacts associated with additional household consumption caused by the increased economic activity. Such modeling is accomplished through specialized software designed for input/output analysis. The descriptive model and multipliers are developed using Census Bureau, Bureau of Labor Statistics, and Bureau of Economic Analysis information and is available at the state and county level.

As an example, suppose you are assigned the task of measuring the economic impact of \$100 million being spent in the first year of a plant construction project. Assume that 50% of the total budget will be sourced in-state. The direct effect would be a \$50 million increase to the construction industry. The input/output model measures the indirect and induced effects of that demand change in the construction industry. **The table below shows the modeled economic value added to the state economy due to spending on the construction of the plant, an additional \$30.9 million in output (\$11.9M indirect and \$19.0M induced).**

In addition to the total monetary impact, the input/output model also estimates job impacts. Economic activity in the initial year of construction supported 893 full time jobs for one year, 584 of which are in the construction industry. The remaining 309 jobs are created and sustained by the construction industry's expenditures within the local economy. Other impacts measured include employee compensation and proprietor's income and indirect business taxes (excise and sales taxes) produced by the economic activity.

Impact of \$50,000,000 Spent in the Other New Construction Industry

Variable	Direct Impact	Indirect Impact	Induced Impact	Total Impact
Industry Output	\$50,000,000	\$11,900,000	\$19,000,000	\$80,900,000
Employment	584.4	114.9	194.1	893.3
Employee Compensation	\$14,900,000	\$3,500,000	\$5,400,000	\$23,800,000
Proprietor Income	\$7,200,000	\$750,000	\$720,000	\$8,670,000
Indirect Business Taxes	\$200,000	\$410,000	\$1,100,000	\$1,710,000

As you can imagine, this is a simple model used as an example. You could further refine the analysis by breaking down the capital budget into various industries. You could also include the value of operating

and maintaining the facility for twenty to thirty years. Furthermore, the employees directly hired by the plant would receive wages, most of which would be spent in-state. The input/output model can handle personal consumption spending patterns and estimate impacts for those as well.

Finally, **economic impact analysis** can also be used to measure the negative impact on the economy of an

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