Appendix A

Competitive Analysis Screen

The analytic screen provides applicants with a standard analytic method and data specification to allow the Commission to quickly determine whether a proposed merger presents market power concerns. Some past merger cases were delayed or set for hearing because an adequate analysis was not part of the application or because sufficient data that would allow the Commission to corroborate or independently check applicants conclusions was not provided in the application. This is especially true regarding the effect that transmission prices and capability may have on the scope of the geographic market. The chances for hearings and delays will be reduced if the screen analysis and data described below are filed with the application.

A. Consistency With DOJ Guidelines

In this policy statement, the Commission has adopted the DOJ Merger Guidelines (the Guidelines) 71/ as the basic framework for evaluating the competitive effects of proposed mergers. The analytic screen applies the Guidelines. Before describing the screen, the Guidelines are briefly summarized so that the screen s consistency with them is clear.

In general, the Guidelines set out five steps for merger

71// U.S. Department of Justice and Federal Trade Commission, Horizontal Merger Guidelines, 57 Fed. Reg. 41,552 (1992).

analysis: (1) assess whether the merger would significantly increase concentration; (2) assess whether the merger could result in adverse competitive effects; (3) assess whether entry could mitigate the adverse effects of the merger; (4) assess whether the merger results in efficiency gains not achievable by other means; and (5) assess whether, absent the merger, either party would likely fail, causing its assets to exit the market.

The analytic screen focuses primarily on the Guidelines first step. This step can be broken down into two components:

Defining product and geographic markets that are likely to be affected by a proposed merger and measuring concentration in those markets. The products to consider are those sold by the merging parties. The Guidelines suggest a way of defining geographic markets based on identifying the suppliers that are feasible alternative suppliers to the merged firm from a buyer s perspective: the hypothetical monopolist test. Essentially, if a hypothetical and unregulated monopoly that owned all the supplies inside the geographic market being tested could profitably sustain a small but significant price increase (i.e., suppliers external to the market are not, by definition, sufficiently good substitutes for the buyers in the market), then the limit of the geographic market has been reached. 72/ The sustainability of a price increase depends on both sellers entering the market and the response of buyers to the increase. The concentration of

72// The Guidelines suggest that a 5% price increase be used for the test, but allow that larger or smaller price increases may also be appropriate. DOJ Guidelines at 41555.

suppliers included in the market is then measured (by summary statistics such as the Herfindahl-Hirschman Index, or HHI, and single seller market share) and used as an indicator of the potential for market power.

Evaluating the change in concentration using the Guidelines thresholds to indicate problematic mergers. The Guidelines address three ranges of market concentration: (1) an unconcentrated post-merger market -- if the post-merger HHI is below 1000, regardless of the change in HHI the merger is unlikely to have adverse competitive effects; (2) a moderately concentrated post-merger market -- if the post merger HHI ranges from 1000 to 1800 and the change in HHI is greater than 100, the merger potentially raises significant competitive concerns; and (3) a highly concentrated post-merger market -- if the post-merger HHI exceeds 1800 and the change in the HHI exceeds 50, the merger potentially raises significant competitive concerns; if the change in HHI exceeds 100, it is presumed that the merger is likely to create or enhance market power. 73/

If the concentration analysis indicates that a proposed merger may significantly increase concentration in any of the relevant markets, the Guidelines suggest examination of other factors that either address the potential for adverse competitive effect or that could mitigate or counterbalance the potential competitive harm. Such factors include the ease of entry in the

73// DOJ Guidelines at 41558.

market and any efficiencies stemming from the merger. 74/ If the additional factors examined do not mitigate or counterbalance the adverse competitive effects of the merger, remedial conditions would be explored at this stage.

B. Analytic Screen Components

There are four steps to the screen analysis.

1. Identify the relevant products.

The first step is to identify one or more products sold by the merging entities. Products may be grouped together when they are good substitutes for each other from the buyer s perspective. If two products are not good substitutes, an entity with market power can raise the price of one product and buyers would have a limited ability to shift their purchases to other products. In the past, the Commission has analyzed three products: non-firm energy, short-term capacity (firm energy), and long-term capacity. 75/ These remain reasonable products under the prevailing institutional arrangements, and applicants should recognize such products in their analysis. Other product definitions may also be acceptable. For example, the lack of on-site buyer storage creates products differentiated by time. Thus,

74// In assessing market concentration, the Guidelines state "...market share and concentration data provide only the starting point for analyzing the competitive impact of a merger." DOJ Guidelines at 41558 .

75// See Baltimore Gas & Electric and Potomac Electric Power Company, 76 FERC 61,111 (1996) at 61,572. The factor that is considered in evaluating long term capacity markets is the effect of a merger on barriers to entry into those markets.

peak and off-peak energy (seasonal and daily) may be distinct products.

The Commission encourages parties to propose even more precise definitions of relevant products where appropriate. Indeed, we would expect to see greater precision in product differentiation as market institutions develop.

2. Geographic markets: identify customers who may be affected by the merger.

This is the first of a two-step process of determining the geographic size of the market. To identify customers potentially affected by a merger, at a minimum, applicants should include all entities directly interconnected to either of the merging parties. Additional entities should be included in the analysis if historical transaction data indicates such entities have been trading partners with a merging party. Applicants and others may argue either that there are other customers to be included as relevant buyers or that identified customers are not relevant buyers. Intervenors also may argue that other customers not identified by the applicants will be affected by the merger.

3. Geographic markets: identify potential suppliers to each identified customer.

This second, and key, step in determining the size of the geographic market is to identify those suppliers that can compete to serve a given market or customer and how much of a competitive presence they are in the market. Alternative suppliers must be able to reach the market both economically and physically. There

are two parts to this analysis. One is determining the economic capability of a supplier to reach a market. This is accomplished by a delivered price test. The second part evaluates the physical capability of a supplier to reach a market, i.e., the amount of the defined product a supplier can deliver to a market based on transmission capacity availability.

Supply and demand conditions in electricity markets vary substantially over time, and the market analysis must take those varying conditions into account. Applicants should present separate analyses for each of the major periods when supply and demand conditions are similar. One way to do this is to group together the hours when supply and demand conditions are similar; for example, peak, shoulder and off-peak hours. There may even be smaller groupings to reflect periods of significantly constrained transmission capability available for suppliers to reach a market.

The screen analysis also examines historical trade data as a check on which suppliers should be included in the relevant markets.

a. Delivered price test.

The screen analysis should first identify those suppliers with the potential to economically supply power to the destination market or customer. The merging companies as well as non-traditional suppliers should be included in this test to identify potential suppliers. Basically, suppliers should be included in a market if they could deliver the product to a

customer at a cost no greater than 5% above the competitive price to that customer. 76/ The delivered cost of the product to the relevant market for each potential supplier is found by adding the potential supplier s variable generation costs and all transmission and ancillary service charges that would be incurred to make the delivery. 77/ Thus, the farther away a supplier, the more transmission and ancillary service prices that must be added to its power costs. Suppliers that would have to traverse a non-open access system can be included as potential suppliers only to the extent they have firm access rights. The analysis should also take into account the effect of line losses on the economics of trade with a distant supplier.

If a supplier can deliver the product to the market at a cost no more than 5% above the market price,that supplier should be included in the geographic market. Applicants are expected to provide product-specific delivered price estimates for each destination market or customer.

The delivered price test uses the following data. Applicants should provide in electronic format these data and any other data relied upon in their analysis.

Transmission prices. Applicants should use the ceiling prices in utilities open access tariffs on file with

76// The Guidelines suggest a 5% price threshold but acknowledge that others may be appropriate. Applicants have the burden of justifying a different price threshold.

77// This would include the unbundled transmission rates of a seller that is a vertically integrated public utility.

the Commission. Where a non-jurisdictional entity s transmission system is involved, the ceiling price in its NJ tariff should be used. If the entity has not filed an NJ tariff, applicants should use their best efforts to secure or estimate transmission ceiling prices. Prices that are not found in a tariff on file with the Commission should be adequately supported. While we are aware that ceiling prices are frequently discounted, this screen analysis is to be conservative. Applicants may present an additional alternative analysis using discounted prices if they can support it with evidence that discounting is and will be available.

Potential suppliers generation costs. The Commission will consider various measures of costs. Applicants are free to use any appropriate cost data as long as it is verifiable and supported with reasoned analysis. Possibilities include generating plant cost data from the FERC Form 1 annual reports or unit specific data. Another is system lambda data. Either of these data can be used to calculate a potential supplier s costs at various time periods. Other measures or data sources may also be appropriate. The Commission has not reached a firm conclusion on a specific cost measure.

Competitive market price. Electricity markets have not

sufficiently matured yet to exhibit single market clearing prices for various products. In addition, price discovery is difficult because the reporting of actual transaction prices is still in its formative stage. Until market institutions mature enough to reveal single market clearing prices, applicants may use surrogate measures as long as they are properly supported. For example, a buyer s system lambda may be used because a buyer is not likely to purchase from a supplier that is more costly than its own costs of production at specific times. 78/ Another possibility might be the price at which the affected customer has been purchasing power.

For each supplier, the screen analysis should then show the amount of each product the supplier could supply to the market. Generation capacity measures are appropriate for this showing. 79/ Different capacity measures should be used, as appropriate, for different products. It is also appropriate, even desirable, to use several measures for one product. Given that competitive analysis is an inexact science and that electricity markets are changing rapidly, using several measures for a particular product

78// System lambda data are usually reported by control area. For smaller entities that are within a control area, the area s system lambda may be a reasonable proxy for the cost of energy from the marginal resource.

79// The DOJ Guidelines support using capacity measures in industries with homogenous products, such as electricity. DOJ Guidelines, at 41557. We note that energy measures (MWH) may also be appropriate.

will corroborate the result of the analysis. While the Commission has not firmly decided on specific measures for analyzing products, the following discussion of capacity measures is intended to offer guidance on this matter. These are some ways to measure a supplier s ability to supply a particular product to a market. They are not product definitions.

Economic capacity. This is the most important of the measures because it determines which suppliers may be included in the geographic market. Economic capacity is that from generating units whose variable costs are such that they could deliver energy to a relevant market, after paying all necessary transmission and ancillary service costs, at a price close to the competitive price in the relevant market. For example, if the average competitive price in the wholesale market is 2.2 cents/kWh during a particular period, all capacity that can sell into the market at 2.3 cents/kWh (5% above the competitive price) should be included in the market. If a seller has no economic capacity, it should not be considered in the market at this stage of the analysis. The economic capacity measure provides a sense of which suppliers own or control the largest shares of low cost generating capacity that has a pronounced competitive advantage over higher cost

capacity in the market. 80/

Available economic capacity. This measure indicates how much economic capacity a supplier identified in the previous step might actually have available to sell into a market. It includes capacity from generating units that are not used to serve native load (or are contractually committed) and whose variable costs are such that they could deliver energy to a market at a price close to the competitive price in the market. The presumption underlying this measure is that the lowest running cost units are used to serve native load and other firm contractual obligations and would not be available for other sales. As competition develops, this presumption may not be valid. 81/ Because of its focus on variable costs, available economic capacity is useful for evaluating energy (in contrast to capacity) markets.

Uncommitted capacity. This traditional measure is useful for evaluating intermediate-capacity markets. For each supplier included in the relevant market, this measure is computed by subtracting native load and firm contractual obligations from total capacity.

80// Economic capacity and similar measures were recommended by the DOJ and FTC. See FTC comments at 10 and DOJ comments, Appendix at 8.

81// For example, in a market with full retail access and a bid-based power exchange, all generation units would be in the market.

Total capacity. Total capacity has traditionally been used by the Commission and others to analyze markets. While this measure does not account for native load obligations and does not capture the availability or cost of generation, and thus is not useful for a delivered price analysis, it does provide a sense of the overall size of a supplier that is included in the relevant market.

b. Accounting for transmission capability

Once the suppliers that might economically supply the product to a market or customer are identified, and the relevant capacity measures are calculated, each supplier s capacity measures should be adjusted to account for how much of the product that seller can physically deliver to that market. The extent of transmission capability determines the extent of a supplier s ability to physically reach a market.

The flows on a transmission system can be very different under different supply and demand conditions (e.g. peak vs. off-peak). Consequently, the amount and price of transmission available for suppliers to reach wholesale buyers at different locations throughout the network can vary substantially over time. If this is the case, the analysis should treat these narrower periods separately and separate geographic markets should be defined for each period.

It is important to assess accurately the amount of transmission capability available for each supplier s use. The

key to incorporating transmission limitations into the merger analysis is to include each supplier in the relevant market only to the extent of the transmission capability available to them. This would be calculated as the combination of the available transmission capability (ATC) 82/ and any firm transmission rights held by the supplier that are not committed to long-term transactions.

In many cases, multiple suppliers could be subject to the same transmission path limitation to reach the same destination market and the sum of their economic generation capacity could exceed the transmission capability available to them. In these cases, the ATC must be allocated among the potential suppliers for analytic purposes. There are various methods for accomplishing this allocation. Applicants should support the method used.

Applicants should also present evidence regarding how transmission capability will be affected by the merger. Transmission line loadings are likely to change as a result of the merging parties combined operations. These changes are likely to result in transmission availability that is different

82// As used by the industry, ATC is a measure of the transfer capability remaining in the physical transmission network for further commercial activity over and above already committed uses. See for example, NERC, Available Transfer Capability Definitions and Determination, June 1996 at page 2. In hours when ATC is zero, a transmission constraint is said to be binding. This prevents the dispatcher from scheduling any additional transactions between the two points in the constrained direction.

from historical experience. Applicants should include in their application the following data: hourly TTC 83/ and hourly firm and non-firm ATC, and firm transactions between relevant control areas. The ATC and TTC data should come directly from the OASIS systems once they are implemented. Until then, applicants should file estimates of TTC and ATC with data or other background material that will allow the Commission to verify that the estimates are reasonable. Given these data, the Commission will be able to assess independently the amount of generation capacity that may be available to the market by each supplier.

c. Trade data check.

It would be expected that there be some correlation between the suppliers included in the market by the delivered price test and those actually trading in the market. As a check, actual trade data should be used to compare actual trade patterns with the results of the delivered price test. For example, it may be appropriate to include current trading partners in the relevant market even if the above analysis indicates otherwise. Alternatively, if there has been little or no trade between a customer and a specific supplier, it may be appropriate to exclude that supplier from the market, unless the applicants can show why it should be included prospectively. The lack of open access in the past may have prevented trade between the entities

83// As used by the industry, total transmission capability (TTC) is the amount of electric power that can be transferred over the interconnected network in a reliable manner while meeting all of a specific set of defined pre- and post-contingency conditions. NERC, id. at page 2.

but trade may be more likely in an open access environment. Applicants should file historical trade data showing transactions between potential suppliers identified in the steps discussed above and the customers in question. The trade data filed should identify the supplier, customer, and characteristics of the transactions (duration, firmness, etc.). Any adjustments to the suppliers included in the market under the delivered price test must be fully supported.

4. Analyze concentration

The final step in the screen analysis is to analyze the effect of the proposed merger on market concentration and competition. To do so, concentration statistics should be calculated using the capacity measures discussed above for each relevant market identified. In cases where limited transmission capability during certain time periods results in a number of time differentiated markets, concentration statistics should be calculated for each. Both HHIs and single firm market share statistics should be presented for both pre- and post-merger conditions. 84/ In calculating HHIs and market shares, the

84// Post-merger geographic markets could include more or fewer suppliers than the pre-merger markets due to the effect of combining transmission rates. In cases where the merged company will charge a single system wide transmission rate, the merger will result in just one transmission rate where there were two before the merger. Thus, after the merger, some suppliers that were excluded from some destination markets could be included if the elimination of one of the transmission charges allows them to economically reach the market. While a stable geographic market would be preferable for analytic reasons, the effect described here reflects the reality of current transmission pricing policy

(continued...)

relevant generation capacity of the customers in each market should be included in the denominator of the ratio statistics. For example, if the economic capacity measure is being used, then the customer s economic capacity should be included. Such capacity would be available and turned to as a response to a significant price increase by external suppliers.

The HHI measures should be compared with the thresholds given in the DOJ Merger Guidelines. The Guidelines address three ranges of market concentration: (1) an unconcentrated post-merger market--if the post-merger HHI is below 1000, the merger is unlikely to have adverse competitive effects regardless of the change in HHI; (2) moderately concentrated post-merger market--if the post merger HHI ranges from 1000 to 1800 and the change in HHI is greater than 100, the merger potentially raises significant competitive concerns; and (3) highly concentrated post-merger market--if the post-merger HHI exceeds 1800 and the change in the HHI exceeds 50, the merger potentially raises significant competitive concerns; if the change in HHI exceeds 100, it is presumed that the merger is likely to create or enhance market power. 85/

(...continued)

and market organization. A buyer inside the transmission area of one of the merging companies could see higher transmission rates as a result of a single system rate for the merged company thereby decreasing the competitive options available to it. We also note that a decrease in transmission prices paid could result in increased demand, congestion, and no increase of suppliers in some markets.

85// DOJ Guidelines, at 41558 .

If the Guidelines thresholds are not exceeded, no further analysis need be provided in the application. We emphasize, however, that the Guidelines are just that: guidelines. There will undoubtedly be instances where concentration statistics may fall just above or just below the thresholds for concern and some additional analysis or judgement is needed. 86/ For example, if a proposed merger s effect on concentration falls just below a threshold, the Commission might still want to see further analysis if intervenors have raised significant concerns regarding the proposed merger. It is reasoned analysis, not blind faith in the thresholds, that must carry the day.

Instances where high concentration is indicated in markets that are defined by fairly short-lived periods of low transmission capability will require additional analysis. The concern with high concentration in a market is that firms will be able to raise prices substantially and adversely impact the market. Relatively short periods of high concentration could be significant if the concentration is high enough. The factors that affect whether such a situation is problematic are the degree of concentration, as measured by HHI statistics, and how long that concentration lasts. High concentration is an indicator for how easy it would be for firms to behave

86// The Guidelines state that the HHI statistics provide a useful framework for merger analysis but they suggest greater precision than is possible with the available economic tools and information. Other things being equal, cases falling just above and just below a threshold present comparable competitive issues. Guidelines, at 41558.

strategically (e.g., collude, or if concentration is high enough, act unilaterally) to raise prices. It is a proxy measure for the degree to which prices could be raised. This, together with the length of time the concentration lasts, gives some idea of the potential severity of anticompetitive impact.

The Commission has insufficient experience to adopt at this time specific thresholds for the various possible combinations of HHI and length of time at which the constrained periods would be problematic. Applicants and other parties are strongly encouraged to analyze short-lived periods of high concentration using the framework discussed above and to support the conclusions drawn from it. There may be cases in which the applicant may be able to show that the anticompetitive effect of constrained transmission availability is de minimis. While the Commission has insufficient experience to establish a specific de minimis test in this policy statement, applicants may argue in a specific case that the anticompetitive effect of a constraint is de minimis. We offer the following general guidance to applicants that seek to make such a showing regarding short-lived transmission constraints. First, peak periods may be more problematic than other periods, because the opportunity to exercise market power likely would lead to significantly higher prices during those hours. Second, some level of market concentration above the DOJ threshold may be acceptable if the applicant can show that there are multiple sellers in the constrained area and/or that there are multiple holders of

capacity into the constrained area. And finally, our concern with short-lived periods of high concentration is greater if the merged firm will have market-based pricing authority. Without such authority, the firm may not be able to substantially raise prices.

If the DOJ Guideline concentration thresholds are exceeded, including instances where short-lived periods of high concentration are indicated to be problematic, then the application should present further analysis consistent with steps 2 to 5 in the Guidelines. The additional analysis could address the potential for adverse competitive effects, the potential for entry in the market and the role entry could play in mitigating the increased market power, any efficiency gains that reasonably could not be achieved by other means, and whether, but for the merger, either party would likely fail causing its assets to exit the market.

If entry is considered as a potential mitigating factor, applicants should address entry barriers, such as the time needed to install any necessary transmission capacity. All entry barriers should be addressed, even if they are not controlled by the applicants. Good market structure can be stymied by entry barriers, regardless of the source, e.g., transmission constraints on a neighboring utility s system.

C. Data

The usefulness of this screen depends on the quality and comprehensiveness of the data filed with the application. The

data needed for the screen generally are publicly available. It is important for applicants to file electronically all data used for the screen analysis, including supporting data, and the data specified in this policy statement. 87/ The Commission must be able to check on the applicants' analysis independently. To do so, the Commission must have ready access to the data. Otherwise, data requests could result in delay. If there are problems in obtaining or understanding the data, the Commission is interested in developing informal means, such as technical conferences, to gather additional needed data or resolve questions or misunderstandings concerning the screen analysis, before the Commission addresses the merger. This approach could reduce the time needed to get useable data and perhaps reduce the need to set a merger for evidentiary hearing.

D. Other considerations

We note that the above description of the analytic screen focuses only on monopoly (seller) power. This is not intended to exclude monopsony (buyer) power as a relevant consideration. An analysis of monopsony power should be developed if appropriate. Long-term purchases and sales data for interconnected entities are already collected and could be used to assess buyer concentration in the same way that seller concentration is calculated. In any event, intervenors may raise this issue if it is a concern.

87// The data that should be electronically filed in an application is listed in Appendix B.

The Commission understands that the screen analysis described in this policy statement will evolve with industry restructuring and market maturation. For example, as unbundling occurs, companies may have market power for sales from individual generating units (e.g., must-run units). In addition, markets are developing in response to competition and are spawning new products and increasingly short term exchanges. Markets will probably be differentiated by product (e.g., firm and non-firm energy and reactive power), by time (e.g., peak, off-peak) or by geography (e.g., markets separated by transmission constraints). The definition of relevant geographic and product markets must account for these new realities. Further, methods for trading and information availability are changing. As regional institutions, such as ISOs, and regional markets develop, transmission services may no longer be a series of transactions based on utility-by-utility corporate boundaries, but rather single regional transactions. This will have important implications for entry, customer response to price changes, and the number of suppliers that have competitive delivered prices.

The means of our analysis may also change. For example, flow based network models that include constraints on transmission networks are likely to be needed for the screen analysis. In the future, the Commission will have to rely less on methods that use costs to assess markets. Generation cost data will become increasingly sensitive, market participants will be less willing to report them, and accounting costs will be

increasingly irrelevant to market behavior. The Commission will rely more on actual transaction prices because they will be more available as market institutions such as ISOs and power exchanges produce this information and because they are a better measure of market boundaries. New market institutions will change the ability to exercise market power. High transactions costs of trading tend to exclude competitors. Transactions costs include the costs of obtaining information, searching for trading partners, and completing a transaction. Further, the improved ability of buyers to respond quickly to price changes can significantly reduce market power. ISOs provide one vehicle for reducing transactions costs and making information available to traders via such means as the OASIS. Real-time pricing provides buyers with an improved ability to respond quickly to price changes.

We note that we intend to apply the analytic screen to mergers between firms that are not solely engaged in electricity markets, e.g., electric-gas mergers. However, it will not be necessary for the merger applicants to perform the screen analysis or file the data needed for the screen analysis in cases where the merging firms do not have facilities or sell relevant products in common geographic markets. In these cases, the proposed merger will not have an adverse competitive impact (i.e., there can be no increase in the applicants' market power unless they are selling relevant products in the same geographic markets) so there is no need for a detailed data analysis. If

the Commission is unable to conclude that the applicants meet this standard, the Commission will require the applicants to supply the competitive analysis screen data described in Appendix A.

D. Remedy

A problematic merger may be made acceptable if certain remedial actions are taken. In some cases, the Commission may recommend them if we determine that a proposed merger will cause significant adverse effects on competition without a remedy. In other cases, the applicants may propose certain actions to be taken if the Commission approves the proposed merger. We offer the following guidance concerning standards for remedies and specific remedial options.

1. Standards

Any remedies proposed by the applicants or relied upon by the Commission to mitigate the anticompetitive effect of a proposed merger should meet the following standards.

Nexus Remedies should be clearly designed to mitigate the specific competitive problems identified in the analysis.

Approval of other authorities Full and effective mitigation must be in place at the time the merger is consummated. Some, and maybe all, of the possible remedies to market power require the approval of other Federal, state and local authorities. For example, local authorities must approve many aspects of transmission line siting and construction and state commissions would surely have to approve any divestiture of generating plants

also used to provide retail service. Promises to the Commission that such actions will be taken in exchange for merger approval are empty if not accompanied by all approvals necessary. We recognize, however, that final approvals may require quite some time to secure. In such cases, we will consider interim mitigation measures that can be implemented more quickly so as not to unduly delay a merger s consummation. We will require, however, that any interim measure must be fully effective in mitigating the identified market power problems.

` Specificity Remedial commitments must specify exactly which facilities are affected by the commitment, e.g., which generating unit(s) will be divested.

2. Remedial options

The remedies discussed in this section are intended to mitigate the market concentration problem caused by the merger. We stress that the options discussion is meant only as guidance and not as an exhaustive list of potentially acceptable remedies.

a) Require transmission expansion

Limitations on available transmission capability that prevent competitors from participating in a market can give substantial market power to incumbents in the market. Conditioning merger approval on eliminating a known constraint could help to mitigate this type of market power. Where constraints on other systems are a problem, the applicants would also be required to seek transmission expansion on those systems. As with relieving constraints on their own system, applicants

should show that all necessary approvals have been secured before the Commission could approve the merger. This process does not need to wait for the Commission to identify a problem. Applicants wanting fast approval could include this as part of the application.

b) No trade over constrained paths

If constrained paths are responsible for market concentration problems and they cannot be relieved for any reason, the company could agree to not use those paths for its own off-system trade when other transmission service requests are pending. This condition would keep the merged company from exercising market power in trade in the constrained areas.

c) Generation plant divestiture

In concentrated markets, including those subject to severe and long lasting transmission limitations, splitting up different generating units into independent and separately owned companies could reduce horizontal market power. Where there are only a few generating units in the market area, divesting those units to just a few owners may not mitigate the market power problem. In such a case, one alternative might be to divest the ownership rights to each unit's energy and capacity to a number of owners. The unit could then be operated as a competitive joint venture and parts of its output could be bid or sold independently.

d) Defer to an ISO's analysis and mitigation efforts

Although ISOs are just now in their formative changes, they hold some promise of playing a part in mitigating certain sources of market power. Applicants' membership in, or commitment to join, an ISO with the authority necessary to mitigate market power could allow the Commission to rely on the ISO to identify and remedy market power problems. The ISO would have access to more information than does the Commission and would possess greater technical expertise to assess problems. More importantly, the ISO would have the proper incentives to mitigate the problems if the ISO s governing body is broadly comprised of market participants. This potential role for ISOs highlights the critical importance of balanced ISO governance.

An ISO would also be a mitigating influence on market power to the extent that it attracts new entrants into a market. An ISO assures comparable and independent access to all customers. These institutional guarantees will serve both to attract new entrants and to encourage continued participation in markets that would otherwise be dominated by vertically integrated utilities.

ISOs are generally thought to be the proper vehicle for dealing with vertical market power, e.g., ensuring transmission expansion or preventing the strategic manipulation of generation dispatch. An ISO would be able to deal with horizontal market power issues to the extent it has the ability to control the dispatch or prices paid to generators. For example, an ISO could identify units with market power (such as must-run units) and

those units could be subject to contracts that mitigate those units ability to raise prices excessively. To take advantage of this option, applicants would be expected to show that: (1) the ISO meets the Commission s standard for independence; (2) already exists or will come into existence before the merger is completed; (3) has a mandate to identify both vertical and horizontal market power issues; and (4) has the authority to either remedy any problems it finds or bring those that it cannot remedy to the Commission.

e) Real-time pricing

Real-time pricing, when combined with other mitigation measures, could help constrain the ability of a firm to raise prices excessively. Buyers who can see the higher prices in real time can respond by conserving. This makes demand more elastic, thereby making it more difficult to exercise market power.

APPENDIX B

Data Used for Competitive Analysis Screen

Analysis	Data Element	Sources 88/
Delivered Price Test:		
	Hourly System Lambda	FERC Form No. 714
	Plant Generation Costs/Capability	FERC Form No. 1
	Unit Generation Costs	
	- Heat Rates	EIA Form 860
	- Fuel costs	FERC Form 423
	Transmission Rates	Filed tariffs, Applicants filing
Transmission Capability Test:		
	Hourly Capability (ATC)	OASIS, Applicants filing
	Total Capability	OASIS, NERC Reports
Developing Capacity Measures:		
	Hourly System Lambda	FERC Form No. 714
	Plant Generation Costs/Capability	FERC Form No. 1
	Unit Generation Costs	
	- Heat Rates	EIA Form 860
	- Fuel costs	FERC Form 423
	Transmission Rates	Filed tariffs, Applicants filing
Adjusting for LT Sales, Purchases, and NUGS:		
	Trade Data (Firm Capacity Sales)	FERC Form No. 1, OE-411, NERC Reports, Applicants filing
Adjusting for Tx Capability:		
	Hourly/Total Capability (ATC,TTC)	OASIS, NERC Reports Applicants filing

88// Most of the data listed is publicly available, however the Applicants should assemble the data and file it electronically with their merger application.