BEFORE THE

KANSAS CORPORATION COMMISSION

PREPARED DIRECT TESTIMONY OF

GARY VICINUS

ON BEHALF OF

MIDWEST ENERGY, INC.

NOTE: Exhibits GWV-1 and GWV-2 follow Exhibit GWV-8.

DIRECT TESTIMONY OF GARY VICINUS

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name and occupation.

A. My name is Gary Vicinus. I am Chief Operating Officer of Pace Energy Services, LLC ("Pace") and Deputy Director for Pace's Utility, Power and Risk Management Division. Pace's corporate address is 4401 Fair Lakes Court, Suite 400, Fairfax, Virginia 22033.

Q. Please describe your education and experience.

A. I have undergraduate and graduate degrees in economics with over 30 years' experience performing economic analyses of energy and electric utility planning issues, including the development of resource plans, evaluating energy portfolios, valuing and acquiring power plants, reviewing, interpreting and negotiating energy contracts, conducting market assessments relating to fuels and power, analyzing contract price escalators, and evaluating the inherent risks associated with energy and fuel costs in contracts.

I developed the process that we employ for electric utilities that we call "Risk Integrated Resource Planning" for electric utilities which we have employed for numerous electric utilities in the United States, including Duquesne Power, MEAG, The California Department of Water and Power, Madison Gas and Electric and Dayton Power and Light.

I have testified in federal and state courts, arbitration proceedings and before regulatory agencies, having been qualified as an expert on a variety of energy planning, pricing and cost issues. My background, and a listing of testimony experience, presentations and publications that I have authored or co-authored, is provided in Exhibit GWV-1 to this Report.

II. PURPOSE OF REPORT AND EXPERT TESTIMONY

I have been retained by Midwest Energy Inc., ("Midwest Energy" or "Company") to describe the resource plan that we developed with the Midwest Energy planning team in late 2004 and early 2005 and the updated wind power assessment we completed in 2006.

This Report sets forth my opinions and conclusions with respect to these studies. All of the analytical work presented in this Report and the resource plan was performed under my overall direction. My opinions are based upon my extensive experience in these matters, as detailed in Exhibit GWV-1.

In preparing this testimony, I have reviewed our proposal and reports, the testimony of Dr. John Cita, KCC Staff Economist, on the recent Westar Docket 07-WSEE-616-PRE, the Direct Testimony of Mr. Gary Groninger in this case, and wind-related background information from Midwest Energy.

III. BACKGROUND AND CONTEXT

Q. When and why was Pace originally retained?

A. Pace was retained in October 2004 to develop with Midwest Energy planning staff a comprehensive resource plan. We completed our report in mid 2005 and presented our findings to Midwest Energy's senior management team and Board of Directors. The final report is provided as Exhibit GWV-2 to this testimony.

Midwest Energy undertook a detailed evaluation of its long-term electricity resource and supply portfolio plan as it was facing a host of supply contract expirations from 2005 through 2010. By 2010, Midwest Energy found itself with a 100% open position in terms of its power supply if additional resources are not layered into the portfolio to offset capacity expirations. Pace was retained by Midwest Energy to help determine the best supply portfolio strategy consistent with Midwest Energy's explicit business objectives, namely: (1) providing rate stability for members, (2) providing supply reliability, (3) maintaining competitive rate levels with neighboring utilities, (4) executing a prudent supply strategy and (5) preserving corporate solvency and strong financial condition. Exhibit GWV-3 shows a summary of Midwest Energy's open position over time as of the time of the study.

Pace's risk integrated resource planning perspective was central to the analysis to ensure the risks of the commodity markets and other factors such as the implementation of transmission projects that might open up the northern and southern Southwest Power Pool (SPP) regions to become a more integrated transmission network, the potential of increased environmental compliance costs, and major contract abrogation were considered in defining a comprehensive resource strategy. Additionally, the load growth (or decline) uncertainty for Midwest Energy was factored into the analysis.

Through the course of the long-term planning study and our direct interaction with Midwest Energy's senior managers, insights were gained on business objectives, the current and future supply options of Midwest Energy, and the importance of transmission availability in successfully implementing the long-term resource plan.

Q. What were the conclusions of your study?

A. Based on our investigation, we determined that

- Base load coal capacity should comprise approximately 45-50 percent of the generation portfolio (approximately 165 MW of coal fired base load generation in 2010).
- Intermediate, typically combined cycle capacity should comprise the next layer of capacity comprising approximately 5-10 percent of the total Midwest Energy system requirements (about 25 MW in 2010).
- If economic intermediate capacity is not found, the additional capacity can be added to Base Load with little impact on expected costs or risks to the portfolio.
- Gas fired peaking capacity should constitute the remaining capacity requirements of the supply portfolio (approximately 40-50 percent or about 135 MWs in 2010).
- Wind generation would be economic at a price of approximately $27 per MWh (excluding transmission implications) and would not negatively impact overall supply portfolio costs at that rate.
- Diversifying the major supply contracts both in terms of actual generation sources and contract counterparties was a prudent commercial strategy when implementing the resource portfolio.

- Transmission congestion was recognized as a significant issue that would be central to defining the feasible supply options, number of potential counterparties, and the total costs of the supply portfolio and would potentially limit the number of available options for Midwest Energy in crafting its resource supply portfolio.

Q. Is it your belief that these conclusions are still valid?

A. Yes. Since these conclusions were drawn, the energy markets have reached new highs as they have responded to dramatic supply and demand shocks since the last half of 2005. By utilizing the risk integrated resource planning methodology, however, we selected a portfolio that stands up under a variety of market conditions. Hence, we believe that the long-term resource recommendations remain valid.

Q. What has Midwest Energy done to implement this Resource Plan?

A. Midwest Energy subsequently solicited offers and completed plant evaluations and has begun acquiring both power generating stations and contracts to fill its void, consistent with the findings of our study.

Of particular interest in the base rate proceeding is the recovery of the costs for the development and operation of the Goodman Energy Center. The Goodman Energy Center consists of nine Wartsila Engines generating units with competitive heat rate (approximately 8400 btu/kwh) performance. The first six are expected to be on line by June 2008 and the remaining three on line by September 2008. The first six units total approximately 50 MW and the remaining three total approximately 25 MWs.

These units are consistent with the needs of the "remaining load" portion of the resource plan outlined above. In fact, the smaller, efficient units will provide Midwest Energy a great deal of flexibility to follow load, much more so than a single 75 MW combustion turbine unit would provide. Midwest Energy will also receive significant availability benefits by having nine incremental generation units instead of a single unit. This will be a significant operational advantage for a system with a small demand and summer peaking characteristics such as Midwest Energy.

Q. What has Midwest Energy done to meet its renewable portfolio requirements?

A. Within the past eight months, the Governor of Kansas has called for every utility in the state to agree to a 10 percent commitment to renewable resources by 2010 and 20% by 2020. If Midwest Energy's firm peak load is about 300 MW, this would amount to a commitment of 30 MW by 2010 and about 60 MW by 2020.

It is our understanding that Midwest Energy has decided to commit to wind power as long as it does not result in a significant increase in the cost of its portfolio. Midwest Energy has already committed to 25 MW of wind power and is currently negotiating for an additional 25MW of wind energy. This will give Midwest Energy approximately 80 percent of the commitment that the Governor requested in 2020 and over 100 percent of the commitment for 2010.

Q. Are the wind generation commitments that Midwest Energy has made consistent with your recommendations?

A. Originally we evaluated what price for wind power would be the breakeven cost for wind generation in the Midwest Energy power portfolio, i.e. at what price would the price of wind generated power not increase the overall cost of supply. Based upon our analysis, $27 per MWh in 2004 dollars or about $28-30 per MWh in 2007 dollars depending upon volume was determined to be the breakeven price for wind generated power. We updated our study in 2006. When we did, we concluded that the competitive price for wind power had risen to $30-32 per MWh in 2007 dollars depending upon the volume. The price of its new wind contract is higher than the original or amended "best guess" forecast contracted, though it is a fixed price for the life of the contract. These contracts also come with the Renewable Energy Certificates (RECs), which have value in the market above and beyond the energy value of the generation, and thereby offset at least some of the upward pressure on price caused by adding wind to the portfolio.

Moreover, the contract for wind power was competitively bid, and was the lowest cost alternative for Midwest Energy. Overall impact to Midwest Energy's portfolio costs has not been determined as its supply portfolio is incomplete. One of the factors that has driven the prices of wind generation higher is the strong demand for wind generation throughout the country and the higher costs for the wind turbine equipment and construction costs that have occurred since 2005. Higher construction costs have also increased the cost of other forms of generation as well. At any rate, Midwest Energy has taken advantage of the least expensive wind power available and prices are likely to rise, not fall, between now and 2010.

IV. APPROACH

Q. What is RIRP?

A. Pace has developed an innovative and highly structured approach to resource planning entitled "Risk Integrated Resource Planning" ("RIRP™") that addresses the failure of traditional IRP approaches. Midwest Energy, by requiring the integration of risk quantification and perspective in the RFP, has seen through these shortcomings. Traditional IRP methods have been lacking over the past decade; such traditional programs do not explicitly address the volatility nor the correlation of resource elements which subject utilities to a variety of risks that can undermine attempts at rate stability and sustained earnings.

Q. Please describe your approach in more detail.

A. The approach consists of several integrated steps:

Pace's risk integrated resource plan began with the development of a risk profile for Midwest Energy. The risk profile determines what could happen to costs if there were no changes to the existing resource portfolio over time. It provides a quantitative assessment of the risks of costs or earnings varying from the most likely outcome due to uncertainties in power or fuel prices, load forecast and regulatory uncertainties and consists of both open position risk, which is the risk that Midwest Energy is exposed to because of the volatility of spot market prices for uncontracted positions and fixed position risk, which is the risk that existing contracted positions will prove to be above market value (thereby exposing the Company to prudence risk). The risk profile varies by year as contract positions expire. We looked at the components of the exposure, whether it is due to gas market volatility, power market volatility, outage or contract abrogation risk.

We also assessed their key corporate objectives. Their objectives included (1) providing rate stability for members, (2) providing supply reliability, (3) maintaining competitive rate levels with neighboring utilities, (4) executing a prudent supply strategy and (5) preserving corporate solvency and strong financial condition. Those objectives helped define the best portfolio since it helped select appropriate risk metrics to evaluate different portfolios. The balance of rate stability and competitive rates for example, can only be determined by evaluating alternative portfolios over a range of market and regulatory outcomes. Exhibit GWV-4 shows how these competing objectives are reflected in the valuation of cost distributions over time. Rate stability requires that the resulting cost distributions are narrowed over time while competitive rates require that the cost distributions shift to the left. Meanwhile Exhibit GWV-5 shows that the central tendency of cost distributions are to widen and shift to the right over time.

Once the appropriate decision metrics were determined, then the most appropriate resource mix was determined. All prudent resource options, including contract additions, tolling options, partial plant ownership, and demand side options were screened and evaluated, and each candidate portfolio mix was evaluated subject to its relative performance against Midwest Energy's risk integrated decision metrics (the combination of expected costs and the variability of costs over time).

Wind energy options were also evaluated. The costs and energy potential for wind were then integrated into the decision metrics and cost analyses to determine the reasonable level of wind resources that may be incorporated into the resource plan with limited impact on portfolio costs.

Market dynamics were integrated into the resource plan using Pace's proprietary market simulation and forecasting tool, the Capacity and Energy Market Analysis System (CEMAS). CEMAS, Pace's spot market clearing price forecast methodology, consists of multiple, interrelated analytical processes overlaid with stochastic inputs and an iterative approach that identifies the statistical uncertainty embedded in prices and project performance.

Alternative resource portfolios were evaluated in the context of both resource needs and economics using Pace's Utility Financial model. Each portfolio had a resulting distribution of costs that is consistent with the objective functions.

Demand side options were also evaluated. We screened various demand side programs that might be feasible for Midwest Energy's customer classes utilizing Pace's CEMAS tool to forecast capacity and energy values. Given the relatively low value ascribed to peaking capacity, none of the demand side options were deemed cost competitive alternatives.

Quantification of uncertainty is a hallmark of Pace's forecasting practice. The risk integrated resource plan analyses include forecasts of the most likely price path expectations plus a probabilistic distribution around the expected price path. This means that resource options were evaluated against the most likely forecast of delivered energy prices, demand expectations, and resource performance characteristics as well as against confidence bands around those expected values based on statistical measures of uncertainty. These integrated confidence bands allow for better decision-making and a better understanding of risk exposures as well as the up- and down-side potential for each market.

The results of Pace's CEMAS and Financial assessment analyses allow for a direct comparison of various contract options and traditional generating resource options which can then be evaluated relative to their performance against the decision metric (which in this case was expected costs and the variability of costs). Each portfolio was evaluated with regard to both the expected costs and the potential for higher or lower costs under the types of contract or ownership structures considered given market, operating and regulatory uncertainty (expressed as stochastic distributions). In addition, there would be an assessment of both open and fixed (regulatory) risks for each portfolio.

Transmission service reservations, the reliability of transmission service requirements for various resource options, and the potential costs of acquiring transmission service, including potential upgrade costs, were based on an analysis of all available planning studies from Midwest Energy as well as SPP at the time.

V. Summary of Conclusions

Q: How do you arrive at the conclusion that acquiring 75.6 MW of peaking generation capacity is consistent with your recommended resource plan?

A: Obtaining the 75.6 MWs of peaking capacity associated with GMEC is a good start at meeting its peaking needs for 2010. One of the principal reasons that we determined that approximately 135 MW of peaking capacity is needed by 2010 is due to the summer peaking demand characteristics of the Midwest Energy system. Midwest Energy would typically expect to have to call on its peaking capacity in certain peak hours for the months of June through September and therefore the capacity factor of the peaking units are expected to be below 20% of annual hours. The peaking units have relatively low capital cost and higher dispatch costs which is the appropriate trade-off for low utilization units. Exhibit GWV-6 shows that there is a risk associated with over-committing to base load capacity. When looking at the lower end of the load growth range, one should not commit for more base-load capacity than what will be consistently needed, especially when reserve margins remain favorable (excess power would be discounted in the market).

Intermediate capacity is most economic when it can be used to meet seasonal demand at capacity factors above 25%. Intermediate capacity would be anticipated to dispatch at various points throughout the year including the majority of on-peak hours throughout the summer months and early fall and also for significant periods in off-peak hours in the summer. Peaking capacity is used to meet daily peaks primarily in the summer months. Mapping the system load characteristics against the recommended resource types is clearly depicted in Exhibit GWV-6.

Exhibit GWV-7 shows the cost trade-offs for different levels of base load coal and intermediate and peaking generation from gas. The exhibit shows that less base load coal generation than optimal increases both expected costs and the variability of costs. More coal in the portfolio than optimal increases expected costs and reduces variability but it costs too much to reduce variability except for small changes to the amount of base load generation.

Q. Did you test alternative portfolios? If so, what did you find?

A. We looked at a variety of portfolios, ranging from 100 percent coal and zero percent combined cycle and zero percent combustion turbine generated power, to zero percent coal and 100 percent combined cycle or 100% combustion turbines, and all combinations in between. As shown in Exhibit GWV-8, the optimal portfolio varied very little across a wide range of outcomes. Only in very low power price scenarios, are the gas combined cycle generation scenarios justified (because the high fixed or capital costs for coal are not justified). In virtually every price scenario, however, the amount of peaking generation required remained about the same.

We also found that there was very little difference in portfolios that had about 30 more MWs of base load generation and correspondingly less intermediate load power. Hence we concluded that if Midwest Energy was unable to secure competitive intermediate generation, that amount of generation capacity could be made up with additional base load generation at little or no additional cost or risk. I will note that the low heat rates associated with the Wartsila generating units will allow them to operate more often than typical peaking units.

Q. What other sensitivity studies did you conduct?

A: We identified five risks to the portfolio that needed to be addressed in the study. Energy price risk (coal, gas and power) and load uncertainty were captured directly in the distributions of load and prices directly in the study. In addition, we evaluated three "quantum" events in addition to our evaluation of commodity and load uncertainty to account for the other three. One included consideration of additional transmission lines that would change the SPP transmission configuration from north and south to become a more integrated region for market pricing purposes. A second quantum event looked at the loss of a single largest unit or contract on the system. The third quantum event was the potential impact of higher than anticipated environmental costs for coal fired generation resulting from more stringent mercury and carbon regulations.

The whole point of these "game changing" situations assessed whether the recommended portfolio was susceptible to changes in one time significant events. The best portfolio is one that meets the company's objectives under nearly every circumstance and has a manageable outcome if a "game changing" scenario does occur.

In none of these quantum events did the need for peaking generation fall below about 40 percent of peak load generation. In every case, the costs of the portfolios changed significantly; in the case of additional transmission lines, power prices fell, while in the more stringent environmental scenarios and the contract abrogation/outage scenarios increased costs to Midwest Energy. The contract abrogation quantum event suggested that several suppliers be used to contract for coal based generation rather than rely on one. But none of the quantum events impacted the mix of generation significantly and particularly did not change the amount of peaking generation required.

Q. Are there any other factors that you would like us to consider?

A. Yes. The Commission has taken a position that resource plans need to explicitly consider risks in determining the optimal resource plan. I believe Midwest Energy's approach in determining an optimal portfolio structure via an RIRP™, and then procuring that portfolio via an RFP is "best practice" and consistent with Commission Staff recommendations. From my read of Dr. Cita's testimony, Staff suggested to Westar that Midwest Energy's use of RFPs reflected an appropriate standard for them to follow. In addition, Staff recognizes that there is inherent risk in using a point load forecast. Again, the RIRP™ approach allows for variance in the projected load because it looks at the wider view of the market.

Q. Does this conclude your testimony?

A. Yes, it does.

Exhibit GWV-3: Midwest Energy Business Objectives – Current Condition

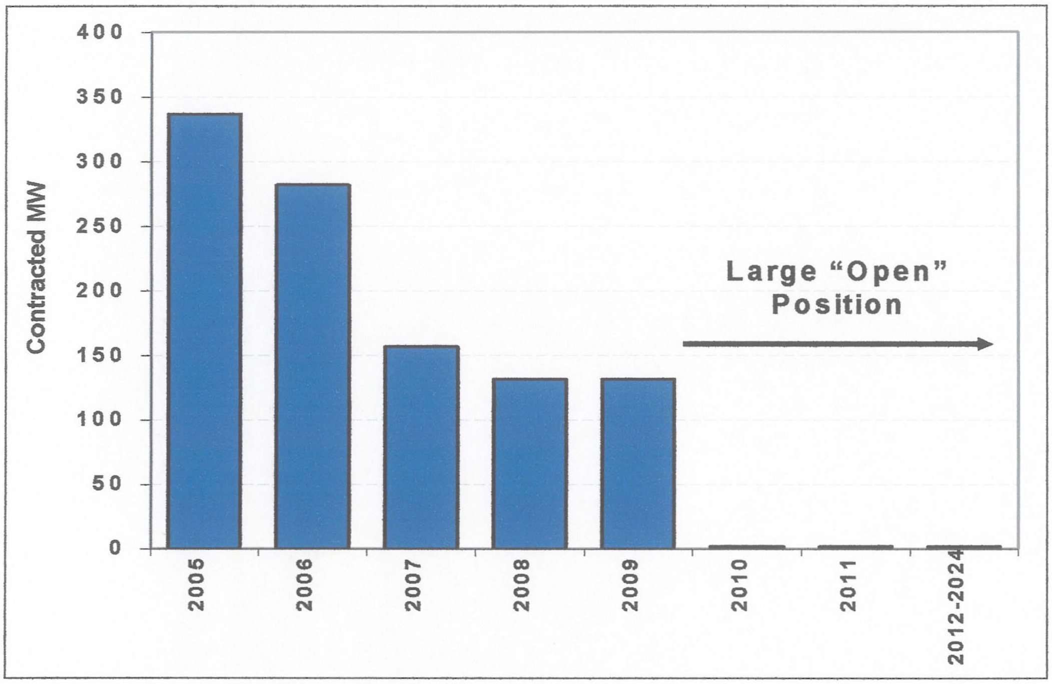


Exhibit GWV-4: RIRP Portfolio Design Approach

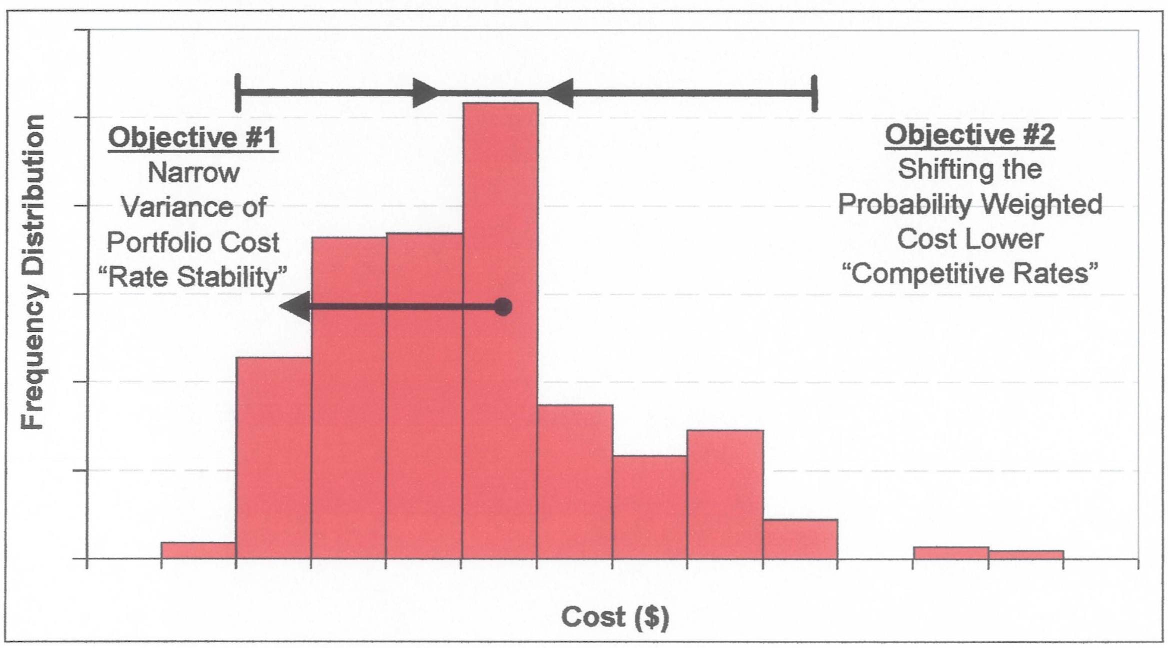
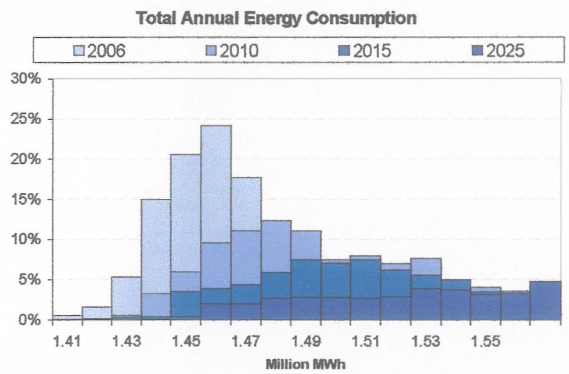
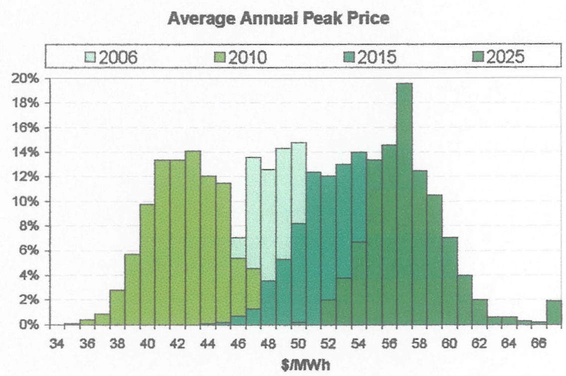


Exhibit GWV-5: Midwest Energy's Risk Profile 2006, 2010, 2015 and 2025





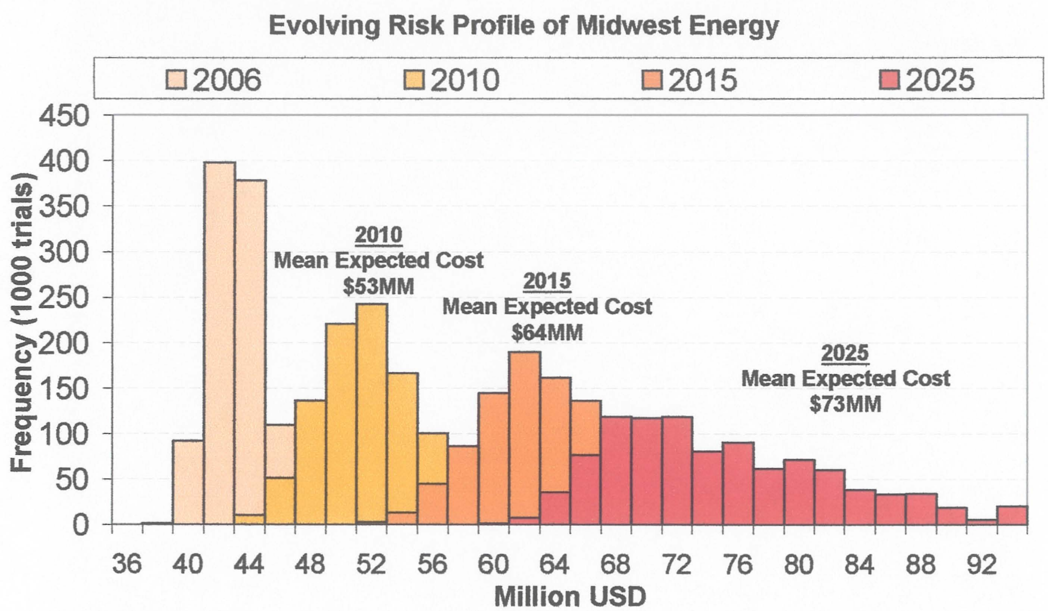


Exhibit GWV-6: Portfolio Mix Overlayed to Midwest Energy's Projected Load Profile (2010)

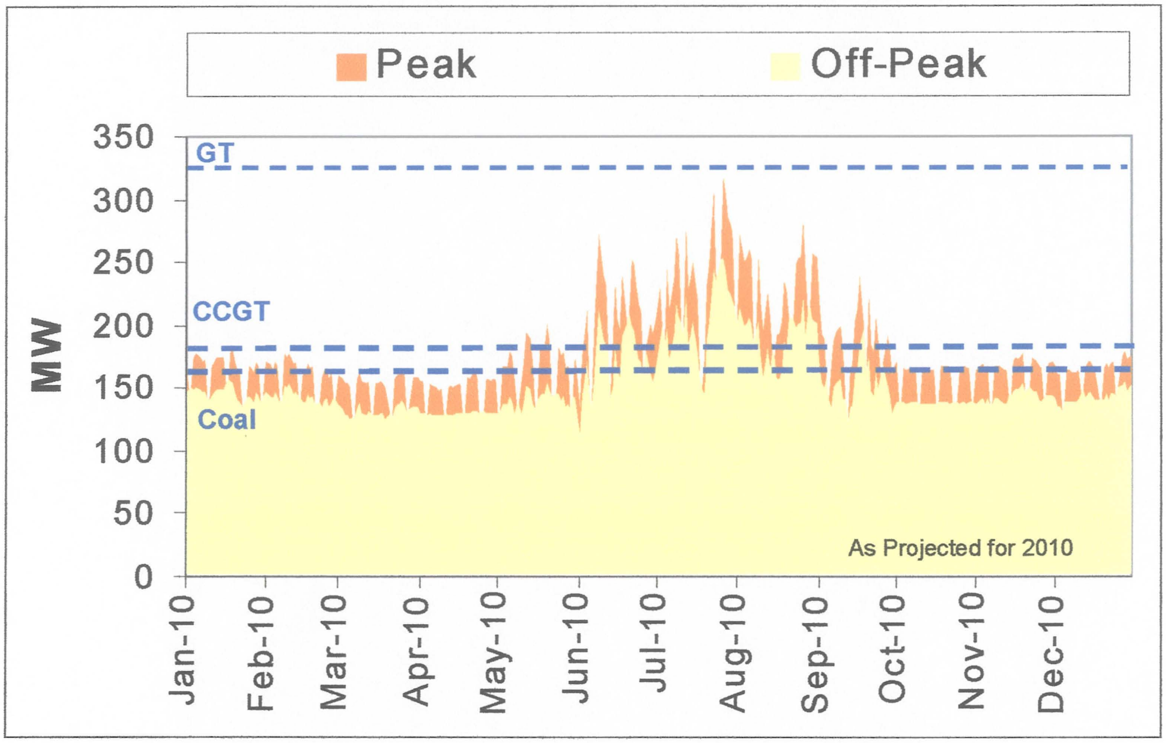


Exhibit GWV-7: Comparison of Expected Costs vs. Cost Variability

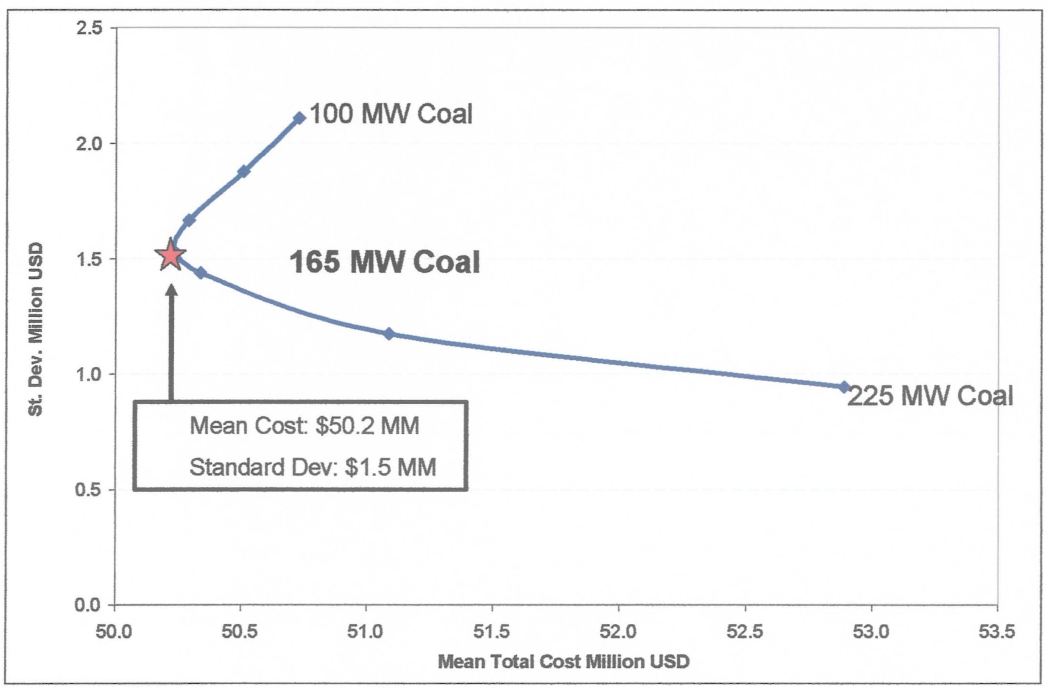


Exhibit GWV-8: Portfolio Screening Level Optimization Results

Price Case	Coal % Portfolio Capacity	CCGT % Portfolio Capacity	GT % Portfolio Capacity
1%	0%	45%	55%
5%	0%	50%	50%
25%	0%	50%	50%
50%	**45%**	**5%**	**50%**
75%	**45%**	**5%**	**50%**
95%	**50%**	**5%**	**45%**
99%	50%	5%	45%

Prudent planning cases given MWE's business objectives (50%, 75% and 95% price cases)

STATEMENT OF QUALIFICATIONS

My name is Gary Vicinus. I am Chief Operating Officer of Pace Global Energy Services, LLC (Pace Global) and also serve as Deputy Division Director for the Utility and Risk Management Services Division. Pace Global's address is 4401 Fair Lakes Court, Suite 400, Fairfax, Virginia 22033.

I received my Bachelors Degree in Economics from Virginia Tech and a Master's Degree in Economics from North Carolina State University. I minored in Statistics.

I have over 30 years of experience in the energy industry. I spent 4 years with Carolina Power and Light Company in the Fuel Department, twenty years with ICF Consulting where I held a number of positions including Project Manager, Vice President, Senior Vice President, Executive Vice President, and culminating in President of their Energy Division, ICF Resources Incorporated. I have been with Pace Global for 5 years, where I have been a Vice President and Senior Advisor to the CEO, then COO and since July 2006, hold my current dual positions.

Pace Global Energy Services is a two-hundred employee energy consulting firm that has its corporate offices in Fairfax, Virginia, and other principal offices in Houston Texas, Columbia South Carolina, London England, and Moscow Russia.

My consulting career has spanned a variety of subjects ranging from strategic energy assessments, resource planning, power and fuel contracting and procurement, market assessments and regulatory analyses. I have performed a number of prudence investigations and management audits. I have worked with a number of utilities, coal companies and independent power producers in either purchasing fuel and transportation services, contracting, renegotiating or litigating coal and transportation agreements. These include Public Service of New Mexico, Western Energy, Entergy, Delmarva Power, Carolina Power and Light Company, Sempra Resources, TMPA, Basin Electric, IMPA, AEP, KCPL, Houston Lighting and Power, Keystone Conemaugh Projects Office, NYSEG, GPU, Consumers Power, Peter Kiewet, and MPPA. Escalation clauses in coal and transportation agreements are often a subject of these assignments. I have solicited coal bids, drafted agreements, evaluated proposals and helped renegotiate agreements. I have testified before state regulatory commissions, FERC, arbitration boards and federal courts in cases in a number of states.

I have performed management audits for public utility commissions of the of the fuel procurement, fuel contracts and transportation agreements, and the escalation of those agreements, economic dispatch and environmental programs of Columbus Southern, Ohio Power, Monongehela Power, and Dayton Power & Light. I worked with Ohio Edison in responding to a management audit of these same issues. I have also been involved with prudence investigations of the fuel procurement and contracting practices what was then owned by NYSEG and Pennsylvania Electric's Homer City Station on behalf of the utilities, the fuel purchasing and contracting practices of Wisconsin Public Service Company on behalf of the Commission, WEPCo on behalf of the Wisconsin

Consumer Council, and Houston Lighting and Power on behalf of Houston Lighting &Power Company. These audits and prudence investigations all involved the submittal of testimony and were completed during the 1990s. I submitted written testimony and was deposed in a litigation between Western Fuels and the Burlington Northern Santa Fe Railroad and the Union Pacific Railway in 2001-2002.

SUMMARY OF PUBLICATIONS AND PRESENTATIONS OF GARY W. VICINUS OVER PREVIOUS TEN YEAR PERIOD

Publications co-authored are provided in the Table below.

Group Presented To	Title/Subject	Date
85 Webinar participants from across the energy sector	"The Challenges of New Electricity Generation"	December 12, 2006
Symposium participants across electric utility sector	"Rolling the Dice with your Resource Strategy?"	February 7-9, 2006
Publication: Public Utilities Fortnightly	"By Executive Decision" (co-authored)	October 2005
National Coal Transportation Association Big Cheese Conference attendees	"Impact of Pending Emission Compliance Requirements on Coal Fired Generation"	July 19, 2004
Symposium participants across energy sector	"Integration of Short and Long Term Planning Using Risk Metrics"	April 23, 2004
National Coal Transportation Association Conference Attendees	"Is Coal About to Make a Big Comeback?"	April 21, 2204
Publication: Public Utilities Fortnightly	"What Does Shakespeare Know about Utility Leadership" (co-authored)	October 2003
Publication: Public Utilities Fortnightly	"Resource Planning After the Crash" (co-authored)	September 9, 2003
Publication: Public Utilities Fortnightly	"Why Aren't Distressed Assets Selling" (co-authored)	May 2003
EEI and Western Coal Conference Attendees	"Coal Contract Administration Issues in the 1990s"	1990s
Energy and Environment Conference Attendees	"Coal Procurement Strategies Under the 1991 Clean Air Act"	1990s

PACE | Global Energy Services

Gary Vicinus, Vice President
Pace Global Energy Services, LLC

Industry Experience: 30 years

Qualifications and Experience:
Mr. Vicinus is Chief Operating Officer of Pace Global Energy Services. He has extensive experience in the energy business as a management consultant, a fuel and power expert and as an expert witness. He has been in the energy consulting business for 26 years and in the energy business for 30 years. His consulting experience has been focused on corporate strategy, electric restructuring, asset positioning, power and fuel market assessment, fuel and transportation contracting, risk integrated resource and fuel planning (including inventories), and as an expert witness on contracts, regulatory and market matters.

Examples of relevant experience include:

Energy Deregulation, Strategy and Planning

- Supported the development of a corporate strategy, resource plan and oversaw an asset acquisition/disposition plan for a regional investor owned utility.
- Supported the development of a corporate strategy for a regional investment owned electric utility company, including a new corporate vision, and strategy focused around a core business model with new applications, repositioning it for growth in the face of declining earnings projections.
- Directed the development of a corporate strategy for a Marketing and Trading subsidiary of a major energy company.
- Directed a strategic assessment of a banking institution affiliate of a major energy company.
- Directed management reviews of restructuring plans of integrated electric utilities, including unbundling of rates, financial implications and readiness for open market access.
- Developed a "risk" integrated resource plan for several electric companies, including investor owned utilities, cooperatives and public power agencies.
- Developed a strategy for auctioning contractual assets for an electric utility.
- Managed the review of 10 statewide plans for open access, published in two reports.
- Oversight of a project to merge several retail businesses into one integrated unregulated business.
- Evaluated the magnitude of uncovered contractual risks associated with the merger of two Midwestern entities, including both market risk and regulatory risk.
- Performed and testified in several electric utility management audits of electric utilities evaluating their preparation for deregulation, organizational reviews and operational efficiency.
- Analyzed regulatory incentive mechanisms and conducted evaluation of benchmarks for consideration in Commission hearings.
- Performed organizational studies for electric organizations.

- Performed stranded cost evaluations and financial models of impacts of rate freezes on utility earnings and returns.
- Benchmarked utility distribution business against competitors and evaluated options for improvement.
- Developed a global energy strategy statement and implementation plan for a major aluminum company.
- Developed an energy strategy for an industrial plant with valuable energy assets in a transition period for the facility.

Asset Valuations and Financial Assessments

- Performed valuations of coal and other generating assets in the U.S. and abroad.
- Directed bid preparations for acquiring military assets.
- Performed feasibility study for coal mine development project in underdeveloped country.
- Directed valuations of nuclear generating facilities, whether and under what conditions a nuclear plant should be completed and whether they were prudently constructed.
- Determined the value and potential liability of a group of NUG contracts.
- Valued a granite operation in a property litigation dispute.
- Determined stranded value of generating assets, fuel contracts and power contracts.
- Valued captive coal mines for both utilities and Commissions.

Contract Renegotiation Support

- Supported Public Service Company of New Mexico in contract negotiations with BHP in 1985, 1990, 1995, 1999 and 2004.
- Supported Energy East (New York State Electric and Gas) in coal procurement evaluations of suppliers and in captive mine, coal related negotiation issues at Homer City.
- Supported a significant Asian utility in coal procurement with U.S. and other international suppliers.
- Supported an IOU in its coal procurement for several years.
- Supported the joint owners projects office on captive mine, coal procurement and negotiation issues with its principal coal supplier.
- Supported a large western investor owned utility on coal procurement and contract negotiations.

Market Assessments

- Directed the development of wholesale electric power outlooks in both the U.S. and Europe.
- Managed an energy outlook service, including power and fuel assessments of markets in the U.S.
- Developed and moderated a webinar series focused on market and regulatory issues

- Performed an analysis of world coal markets on behalf of an international client.
- Conducted numerous market price determinations, fuel supply availability assessments.
- Assessed environmental compliance strategies, environmental trading strategies and emission market opportunities.

Fuel Contracting, Procurement and Organizational Studies

- Performed organizational reviews.
- Performed feasibility studies.
- Negotiated and renegotiated coal contracts.
- Drafted supply plans, and policies and procedures.
- Performed fuel procurement and fuel inventory studies.
- Evaluated mine takeover and mine closing studies.
- Drafted contract language and solicitations.
- Market Rules and Readiness for open access.
- Stranded and avoided costs
- Market power
- Organizational effectiveness
- Nuclear plant investment
- Environmental compliance strategies
- Power plant performance
- Power Purchases and Sales
- Plant dispatch
- Contract disputes
- Market price disputes
- Damage assessments
- Captive mines
- Fuel inventories

Public Testimony

- Delmarva Power: Market forecasts of coal, gas and power
- Kansas City Power and Light before Missouri Public Service Commission: Coal inventories
- Gulf Power before the Florida Public Service Commission: Coal inventories
- New York State Electric and Gas (now Energy East) before the New York State Corporation Commission: Prudence of coal procurement practices and investment in coal preparation plant
- Rochester Gas and Electric before the New York State Corporation commission: Prudence of coal and oil procurement
- Niagara Mohawk Corporation before the New York State Corporation Commission: Prudence of coal and oil and nuclear fuel issues

- Houston Lighting and Power (now Reliant) before the Texas State Corporation Commission: Prudence of coal procurement practices
- Ohio Edison before the Public Utilities Commission of Ohio: Coal procurement practices
- Wisconsin Public service Commission: Prudence of fuel procurement practices of Wisconsin Public Service Company (including inventories)
- Wisconsin Citizens Utility Board before the Wisconsin Public Service Commission: Fuel procurement practices of Wisconsin Power and Light Company (including inventories)
- Public Utilities Commission of Ohio: Prudence of an extended Davis-Besse nuclear plant outage
- Public Utilities Commission of Ohio: Management audits of fuel procurement practices and inventories, system dispatch and environmental compliance of Monongahela Power (twice), Dayton Power and Light (twice), American Electric Power Company's subsidiary, Columbus Southern Coal Company (twice) and AEP's Ohio Power (twice).
- Indiana Municipal Power Company before the Federal Energy Regulatory Commission: Prudence of AEP's coal procurement practices and market assessments for a contract dispute
- New Jersey Board of Public Utilities: Reasonableness of Public Service Electric and Gas Company's stranded cost and separately its market restructuring filing, covering stranded costs, rate impacts, market power, readiness of market competition, and a variety of related issues.
- Testimony before Surface Transportation Board on coal demands and rates for power stations on a stand along railroad for AEP.

Arbitrations and Litigations

- Has testified or been an arbitrator in over 14 states and before FERC.
- Entergy in a dispute with the Union Pacific Railroad in Wyoming District Court over reliability, damages, the prudence of coal supplies, inventories and related issues.
- Western Fuels in a dispute with the Union Pacific Railroad in Kansas District Court over reliability, damages, the prudence of coal supplies, inventories and related issues.
- AEP Oklaunion before the Surface Transportation Board concerning litigation involving the reasonableness of its rail rates. Performed demand and revenue estimates in calculation of stand alone railroad costs.
- Arbitrator in dispute between Northern Indiana Public Service Company over a market price re-opener with Arch Mineral Coal Company (Missouri arbitration).
- MMWEC in dispute with the City of Hull, Massachusetts and others in a dispute over the prudence o the Seabrook Nuclear Station (Massachusetts District Court).
- Ohio Valley Coal Company regarding a coal contract and market price dispute with AEP.
- Taiwan Power Company before its Control Juan over prudence of its U.S. coal purchases (Taiwan court).
- Taiwan Power over market price dispute with Pen Coal Holdings (arbitration).
- Illinois Power in a coal market price dispute with Arch Mineral Coal Company (arbitration).
- Department of Justice over the value of a condemnation of property over granite rights.

- Peter Kiewit over coal contract and environmental issues, and market prices in dispute with Commonwealth Edison (now Exelon) - Wyoming District Court.
- Green Coal Company over coal contract dispute with a contractor (Pennsylvania District Court).
- Dairyland Power on coat contract issues and market price issues with its coal supplier, Amax Coal Company (Wisconsin District Court).
- New York based Cement Company in dispute with supplier over damages regarding prudence of coal procurement issues.

Testimony Support

- Power contract dispute over Rancho Seco Nuclear Plant agreement between two California utilities.
- Prudence of coal procurement for captive mines in Utah before Utah Public Utilities Commission.
- Supported Hopi Indians in coal contract issues with Peabody Coal Company.
- Supported the Governors' Energy Counsel (now Energy Office) in its review of the prudence of PPL's interest in the Limerick Nuclear Station.

Employment History:	2006 to present	Corporate Chief Operating Officer and Deputy Director, Utility and Risk Management Services Division, Pace Global Energy Services
	2004 - 2005	Operating Officer, Pace Global Energy Services, LLC, Fairfax, VA
	2002 – 2004	Vice President & Senior Advisor to the CEO, Pace Global Energy Services, LLC, Fairfax, VA
	2001	President, Vicon Energy Consultants Inc.
	1999 - 2001	Executive Vice President, ICF Consulting Inc.
	1995 - 2001	President, ICF Resources, Inc. (sub of ICF Consulting)
	1993 - 1995	Executive Vice President, ICF Resources, Inc.
	1990 - 1992	Senior Vice President, ICF Resources, Inc.
	1985 - 1990	Vice President, ICF Resources, Inc.
	1980 - 1985	Project Manager, ICF Resources, Inc.
	1978 - 1980	Senior Fuel Analyst, Carolina Power and Light
	1976 - 1978	Fuel Analyst, Carolina Power and Light
Education:	MA	Economics, North Carolina State University
	BA	Economics, Virginia Polytechnic Institute and State University

Languages: English

Professional Memberships:

• Pace Global Energy Services, 2002-present	Member Executive Operations Committee
• ICF Consulting, 1995-2001	Member, Executive Committee
• ICF Consulting, 1995-2001	Member, Management Committee
• ICF Energy Solutions 1998-2001	Member, Board of Directors

Exhibit GWV-2

to

Gary Vicinus Direct Testimony Report

PACE | Global Energy Services

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Long-Range Resource Planning Study

Prepared for:

Midwest Energy, Inc.

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EXHIBITS

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Executive Summary

Long Range Resource Plan

Conclusions & Recommendations

Prepared for:

Midwest Energy, Inc.

EXECUTIVE SUMMARY

BACKGROUND

Pace Global Energy Services ("Pace Global") was retained by Midwest Energy ("MWE") to develop a detailed Long-Range Resource Plan (LRRP) for the procurement of electric generating capacity and associated energy purchases. The primary objective of the LRRP was to determine the appropriate replacement strategy for existing capacity contracts as they begin to expire between now and 2010. Pace Global's detailed analysis has culminated in recommendations related to the appropriate supply portfolio, an evaluation of system supply reliability, the cost implications of adding wind to the supply mix, and the role transmission service will play in securing the recommended supply portfolio.

INTRODUCTION

A utility's supply portfolio is the foundation of any utility's ability to serve its customers reliably and cost effectively. As such, the long-term supply strategy must be considered carefully and in the context of the utility's explicit business objectives. For MWE, the stated business objectives are:

- Providing Rate Stability for Members
- Preserving Supply Reliability
- Maintaining Rate Levels Competitive w/ Neighboring Utilities
- Executing a Supply Strategy that is Prudent
- Preserving Corporate Solvency & Strong Financial Condition

To ensure these business objectives are met over the long-term horizon[1] Pace Global considered the full range of market outcomes and quantified the impact of risk prior to making its supply portfolio recommendations. The conclusions and recommendations contained herein recognize and account for the significant risk that is inherent in energy markets in general and in particular in the Southwest Power Pool (SPP). Pace Global has utilized its *Risk Integrated Resource Planning* analytical approach in solving similar resource planning and supply portfolio decisions for other utilities and energy intensive companies throughout the world and is recognized as a leader in integrating risk considerations into strategic decision making. The principal difference between RIRP and more standard Integrated Resource Planning is that RIRP explicitly considers a wide range of load and market outcomes on the portfolio to ensure that the selected portfolio will meet the stated business objectives under a wide range of possible outcomes.

RISK PROFILE OF MWE

The *Risk Profile* of MWE is defined by the quantity of power that is anticipated to be needed over time and the range of prices that MWE will have to pay for that power over the same period. The combination of quantity and price defines the system cost and underlies the rates that will be passed on to the members. Both the volume and price of power required in the future are not known but can be defined/bounded by statistical techniques, which allows the probability of various outcomes to be considered when making long-term strategic supply decisions. For MWE, as with most utilities, the risk of higher costs grows with time as the volume uncertainty grows (due to demand growth and contract expirations) and pricing (due to market volatility and contract expiration) is more uncertain over time.

The goal of the analysis is to both reduce the expected cost of the supply portfolio and reduce the variation of costs through supply portfolio combinations that reduce MWE's exposure to the open (spot) market. Pace Global considered a wide range of coal, gas and peaking contract options to discern an appropriate (i.e. "optimal") supply mix that achieves the stated business

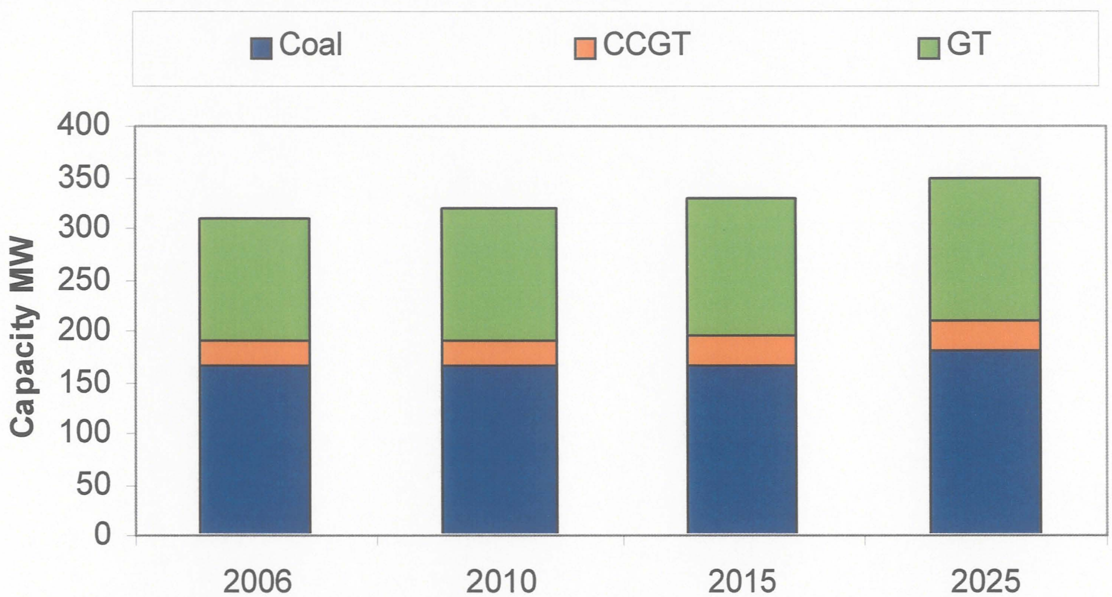
[1] The long-term horizon for this study is through 2025.

objectives. It is important to note that there is an inherent trade-off required to balance the objectives of rate stability and competitive rates.

SUPPLY PORTFOLIO RECOMMENDATIONS

On the basis of our risk integrated analysis, the recommended supply mix for MWE contains approximately 165 MW of coal fired base load generation, 25 MW of combined cycle gas turbine intermediate generation and approximately 135 MW of peaking gas turbine capacity (based on 2010). This general portfolio mix is anticipated to remain generally stable throughout the study period as peak load resource requirements increase slightly (mean growth rate of 0.5% annually). The portfolio mix over the planning horizon is presented in Exhibit 1.

Exhibit 1: Recommended Supply Portfolio Through 2025



Source: Pace Global.

While the optimum portfolio can only be determined with actual binding supply offers, Pace Global has concluded that the recommended portfolio supply mix strikes an appropriate balance between the objectives of cost competitiveness and rate stability. Coal based generation is anticipated to be a significantly more stable priced energy source than natural gas and including a base load portion of coal generation in the supply portfolio is likely to remain desirable. Our analysis also indicates that adding an incremental 10 – 20 MW of coal based capacity to the recommended portfolio provides the potential of lowering system cost while maintaining an appropriate balance across the other business objectives.

It is important to note that the recommended supply portfolio as recommended above is generally consistent with the existing supply mix that is currently under contract with MWE, suggesting that past resource decisions were made prudently and in alignment with the business objectives.

Reliability Considerations

Pace Global's analysis also evaluated the future supply reliability for MWE given the importance of this business objective for Midwest's members and the management team. Supply reliability was evaluated on the basis of the supply-demand balance of the SPP market, SPP's reliability requirements for load serving entities and the historic reliability performance in the region overall and specific to MWE's service territory.

The current reserve margin[2] in the SPP is in excess of 30%. With projected load growth and limited capacity additions, the SPP reserve margin is not anticipated to approach an equilibrium condition (~16%) until about 2012. The SPP reliability criterion requires a minimum reserve margin of 13.6% be carried by each load serving entity. Pace Global's analysis of SPP planning studies and discussions with MWE personnel indicates that the historic reliability of the SPP system has been robust and has not negatively impacted MWE's members. The SPP studies do not reference any location specific reliability concerns that would require increased reserve margins to bolster reliability. Pace Global's conclusion is that the historic standard of reliability is likely to be maintained for the foreseeable future. By adopting the SPP criterion,, MWE would be both prudent in its supply planning obligations and would meet the reliability expectations of its members.

Stress Testing the Recommended Portfolio

Pace Global stress tested the recommended supply portfolio to ensure that the recommendation remains sound under a variety of market conditions. The conclusions in the event of supplier default and stringent environmental compliance are summarized below:

Supplier Default Scenario

In light of the recent past in the energy markets where major suppliers have defaulted on their contractual commitments[3], it is prudent to consider MWE's risk exposure in the event of such an occurrence. Pace Global considered the range of potential cost impacts to MWE if the base load supply was concentrated with a single supplier versus that of a portfolio which is diversified across multiple suppliers. The conclusions from this analysis suggest that by targeting a diversified portfolio of three or more suppliers MWE is able, in large part, to mitigate the risk of supplier default. The same logic applies to diversifying the supply risk across multiple generating units as a long-term unplanned outage, especially at a base load coal unit, can introduce similar supply portfolio risk.

[2] Reserve Margin defined as a percentage = (Capacity in MW/Peak Demand MW – 1) * 100
[3] Contract default can also be thought of as an unanticipated and prolonged unit outage that places MWE in the market to make up the shortfall.

Stringent Environmental Compliance Cost Scenario

By including a large percentage of coal generation in the recommended portfolio there is an inherent risk of increased environmental compliance costs in the future. Therefore, Pace Global considered a stringent environmental compliance requirement for coal plants involving the simultaneous reduction of mercury and carbon emissions[4]. Any new environmental regulations are unlikely to require implementation prior to 2015. While the cost impact of such new regulations once in place would increase mean expected costs by approximately 6%, it would not alter the selection of our underlying portfolio recommendations.

Impact of Wind Generation on Supply Costs

Wind generation developers are proposing large wind farms in various locations throughout Kansas and there have been initial discussions regarding the establishment of renewable portfolio standards in the future. Therefore, it is important to consider the potential cost impact of wind generation on the members of MWE. Wind supply contracts are typically take-or-pay commercial contracts which provide intermittent and highly variable energy sources and displace other scheduled energy from the supply portfolio. Pace Global concludes that wind must be priced at or below $27 per MWh for there to be no net impact to the cost of its supply portfolio.

The results of the wind impact analysis will help MWE in negotiating acceptable pricing terms with wind suppliers and in establishing its position with regards to renewable portfolio legislation.

Transmission Risk and Future Implications

It is important to draw a distinction between system reliability and transmission availability. Historically, MWE's supply has been extremely reliable and transmission availability and the associated cost have been reasonable. While supply is expected to continue to be reliable for the foreseeable future, there is recent evidence that the regional transmission availability is deteriorating and could impact MWE's ability to secure its supply portfolio in a timely and cost effective manner. Several recent requests from MWE for firm transmission for relatively modest amounts of capacity (~25 MW) have been denied by SPP or would only be approved on the condition that MWE pay significant upgrade or unit re-dispatch costs. Given these recent developments, transmission availability will become a critical element of supply portfolio development as commercial offers are considered and supply contract commitments are agreed to. The lead times associated with the SPP transmission service requests are problematic as it can take 8-12 months for a definitive response, lengthening the supply contract negotiations.

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[4] Our base case results and recommendations assume the anticipated regulatory regime for all criteria pollutants and environmental compliance scenario includes incremental costs in addition to what is currently visible on the regulatory horizon.

LONG-TERM PLANNING STUDY BACKGROUND

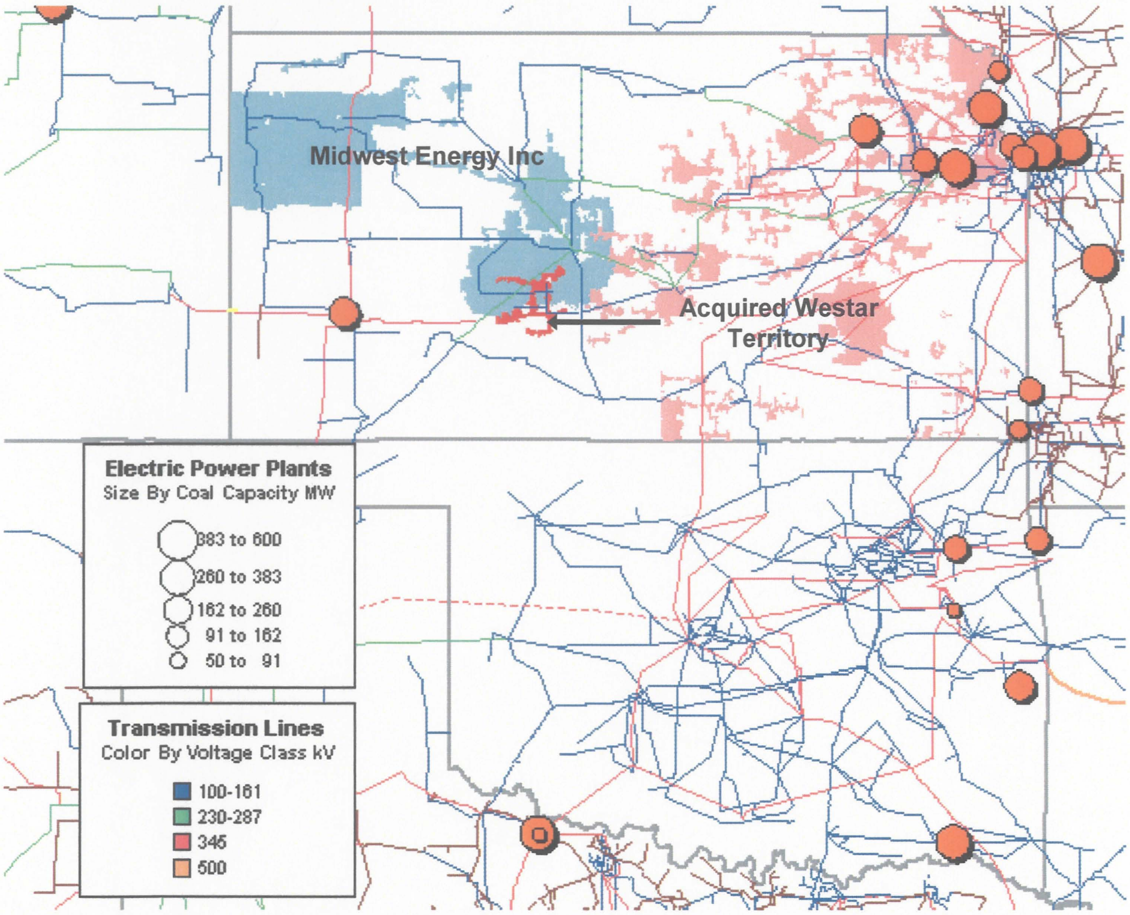
Midwest Energy, Inc. ("Midwest") is an electric and natural gas cooperative utility serving parts of central and western Kansas. Midwest owns and operates only a small amount of generation capacity and therefore supplies the majority of its member's electrical capacity and energy needs through a portfolio of supply contracts. These contracts essentially expire between now and 2010 and will need to be replaced in some form; either with new power purchase agreements, generation development, ownership participation or alternative means in order to meet the capacity and energy requirements of its members and achieve its regulatory and market participant obligations.

Midwest is committed to proactively considering the implications of its resource decisions on member rate levels and rate stability and in maintaining its long term financial health. The electricity market and interrelated energy markets are uncertain and volatile owing to load growth variability, generating capacity availability, regional and localized transmission availability, and the increasing price volatility associated with natural gas and coal fuels, among other factors. It is prudent for Midwest to proactively consider its resource supply options well in advance of the expiration of its current supply portfolio as the resource choices that are made will underpin their rate stability and rate competitiveness well in to the future. In this regard, Midwest has contracted Pace Global Energy Services ("Pace Global") to assist with development of a Long-Range Resource Plan (the "LRRP") to supply electric capacity and energy covering the period 2006 through 2025.

Midwest is subject to the regulatory jurisdiction of the Kansas Corporation Commission in matters related to the provision of retail electric service and the siting of transmission and generation facilities. As to matters related to transmission service and wholesale energy sales, Midwest is subject to the jurisdiction of the Federal Energy Regulatory Commission. Midwest is a member of the Southwest Power Pool ("SPP") and relies on the transmission coordination and market rules of this regional transmission organization. Midwest does not operate as an independent control area. Rather, control area services are purchased from Westar Energy. However, Midwest Energy does operate and maintain its own transmission system, having interconnections with Westar Energy, Aquila and Sunflower Electric. Furthermore, Midwest independently contracts for and schedules all capacity and energy purchases, and also schedules operation of its owned generating resources as needed.

Midwest Energy operates two regional systems – the "M" system, its legacy system, and the "W" system, a system it recently acquired from Westar Energy. A map of the overall Midwest system is shown in Exhibit 2.

Exhibit 2: Map of Midwest System



This report documents the planning methodology, key considerations and conclusions of the Resource Plan.

STUDY APPROACH

The overall approach taken in the development of this study is similar to the traditional Integrated Resource Plan ("IRP") techniques as alternative resources are considered against future expected capacity and energy requirements to arrive at resource decisions that will meet the regulatory and reliability needs of the utility. However, the development of this Plan incorporates the current dynamics of the energy and fuel markets through the use of probabilistic analytical techniques and recognizes the importance of quantifying the risk associated with procuring capacity and energy in the SPP market. This more effective and insightful resource planning approach, which Pace Global has termed Risk Integrated Resource Planning ("RIRP"), has been employed to determine the recommended supply portfolio that will best serve Midwest over the strategic planning horizon.

The RIRP process begins by establishing the business objectives of Midwest.

CORPORATE OBJECTIVES AND KEY RISKS

Through detailed discussions with Midwest's senior management, it is clear that Midwest places a high and essentially equal priority on rate stability and the reliability of supply and recognizes that the other corporate objectives are related and important to the long-term success of the cooperative and its charter to serve its members. The following five objectives are of principal importance to Midwest and the LRRP and its recommendations were founded on the basis of these primary corporate objectives:

- Stable Rates
- Reliable Supply
- Achieving a Standard of Regulatory Prudence and Approval
- Maintaining Corporate Solvency and Financial Health
- Achieving Customer Rate Levels That are Competitive With Neighboring Utilities

While these objectives are interrelated and complimentary in many cases, there are competing aspects of the corporate objectives that require a compromise regarding resource portfolio decisions. For example, the portfolio that is expected to achieve the lowest rates might sacrifice reliability and/or rate stability. The objective of low rates and low risk are often at odds. It is in fact these trade-offs between objectives that drive different companies to make different decisions about their portfolios facing the same markets. One of the values of the RIRP process is that alternative portfolios can be evaluated based upon metrics that are tied to these objectives. For example, stable rates can be evaluated by the variability of the costs of the portfolio under a variety of market outcomes. Competitive prices can be measured as the portfolio that achieves the lowest expected costs. The RIRP process requires that these two objectives are considered simultaneously for decision making.

Prioritizing MWE's objectives results in the need to consider the expected costs that the portfolio is anticipated to yield as well to measure the variability of costs of each portfolio while considering appropriate reserve margins for purposes of reliability and meeting regulatory requirements.

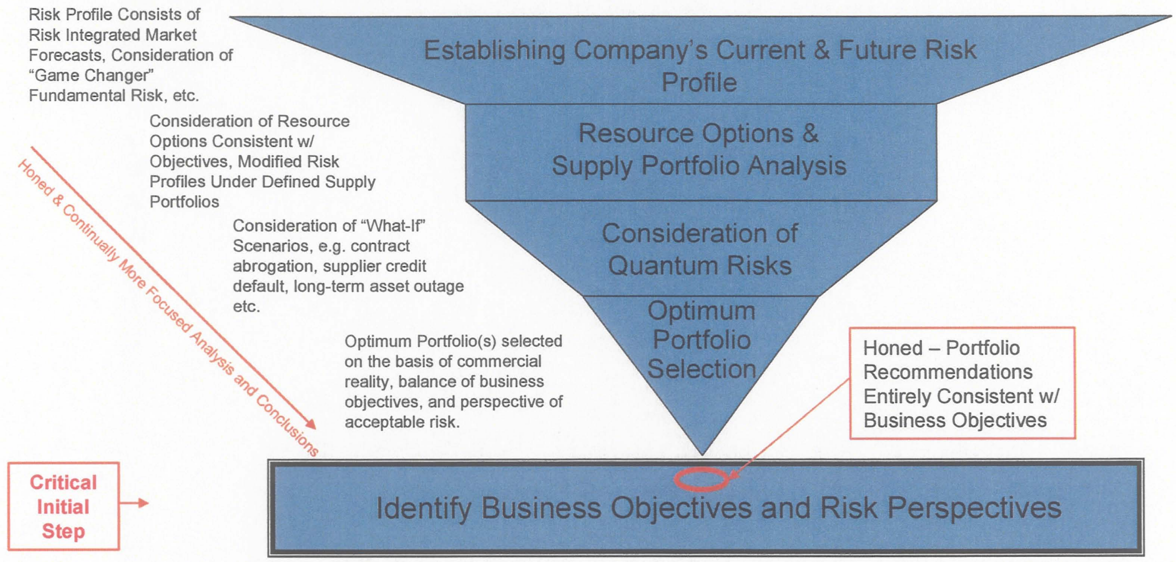
Identification of Key Supply Portfolio Risks to be Considered in the LRRP

In addition to establishing business objectives early in the RIRP process, Midwest and Pace Global identified several aspects of risk and uncertainty that needed to be considered to make fully informed supply portfolio decisions. These risks include:

- *Energy price risk*, which includes the variability and potential levels of power prices, gas prices and coal prices. Energy price risk was incorporated directly into the analysis by using probability distributions for each energy commodity that drives electricity prices as well as the impact of SPP regional demand growth scenarios that could materialize and impact power prices.
- *Customer load uncertainty*, which captures the range of capacity and energy requirements for Midwest customers specifically, given alternative demographic trends and the resulting customer load.
- *Market structure risk,* which considered the electricity price impact of a SPP market that is more integrated north-to-south via the addition of high voltage transmission projects.
- *Environmental regulatory risk,* which defines the potential impact of more stringent environmental regulatory regimes (e.g. instituting environmental compliance programs that could change the cost structure for key generating resources). The impact of increased renewable energy mandates, specifically wind generation, was also considered to determine the potential impact on portfolio supply costs.
- *Supplier default and/or unanticipated outage risk.* Finally, single shaft and supplier risk was considered based on the financial impacts of large supplier default and/or an unanticipated and extended plant outage.

To understand Midwest's long-term supply risk and develop an actionable resource plan consistent with Midwest's business objectives the RIRP process employs three analytical phases prior to making a final, optimum portfolio selection. The comprehensive RIRP process is depicted conceptually in Exhibit 3.

Exhibit 3: RIRP Analytical Framework



With the business objectives and risk perspectives firmly established as a foundation for the study, Phase I – Risk Profiling commences the analysis and is characterized as follows:

I. Establishing Midwest's Current and Future Risk Profile

- Define Midwest's current resource portfolio and how it evolves over the LRRP's planning horizon.
- Establish Midwest's customer demand and energy requirements including quantification of the potential variability of those requirements over the LRRP's planning horizon.
- Establish the base case view of the SPP market over the LRRP's planning horizon and quantify the uncertainty of the base case market view over the LRRP's planning horizon.
- By integrating the Midwest customer load uncertainty and SPP electricity market price uncertainty, Midwest's *Risk Profile* and its evolution over the LRRP's planning horizon is defined and forms the basis of the evaluation of alternative supply resource portfolios.

Following Phase I – Risk Profiling, Phase II of the RIRP analysis includes postulating and analyzing resource options to meet Midwest's business objectives. Phase II can be summarized as follows:

II. Postulating Resource Options, Analysis, and Evaluation vs. Risk Profile

- Define commercially realistic resource options that are consistent with Midwest's business objectives and can reasonably meet the anticipated capacity and energy requirements.
- Perform analysis of expected portfolio supply costs, the distribution of supply costs, and consideration of other qualitative factors for each supply portfolio.
- Discuss interim results, develop an initial rank order of resource options, and refine analysis.
- Ensure supply portfolios are yielding results consistent with the established business objectives.
- Analyze the regulatory and economic considerations associated with the appropriate reserve margin and implications of future transmission availability.
- Consider the enhancements that can be made to Midwest's *Risk Profile,* in terms of expected cost and cost stability, if certain supply portfolios were implemented.
- Develop preliminary supply portfolio selections on the basis of Phase II analysis.

Upon completion of Phase II of the RIRP analysis, the preliminary supply portfolio selections – those portfolios that appear to meet Midwest's business objectives and are deemed superior in terms of cost level and cost stability – are "stress-tested" to ensure the final recommendations consider the potential impact of extreme events or circumstances. This is a critical phase of the RIRP analysis as various "what-if" and potentially short-term scenarios can be addressed to ensure the recommended supply portfolio will perform as anticipated and, if not, the portfolio can be modified appropriately. We have termed these various "what-ifs" as Quantum Scenarios. Phase III of the RIRP analytical process can be summarized as follows:

III. Considering Quantum Scenarios and Recommending Final Portfolio

- Through discussions with Midwest senior management and based on Pace Global's significant experience on similar planning studies and the mistakes other utilities have made in the past, we collaborate and define the quantum scenarios that will be considered in the Phase II analysis.
- Stress test resource portfolios under various quantum scenarios, e.g. major supplier contract abrogation and/or long-term outage of major unit, credit downgrade event, change is environmental compliance policy, market structure changes, impact of renewable energy mandates, etc.
- Consider implications of quantum scenarios and modifications required of the preliminary supply portfolio selections.
- Select optimum portfolio balancing business objectives, the results of expected supply costs and cost stability over the long-term planning horizon.

Throughout the balance of this report, we will reference the RIRP process, please refer back to Exhibit 3 as necessary.

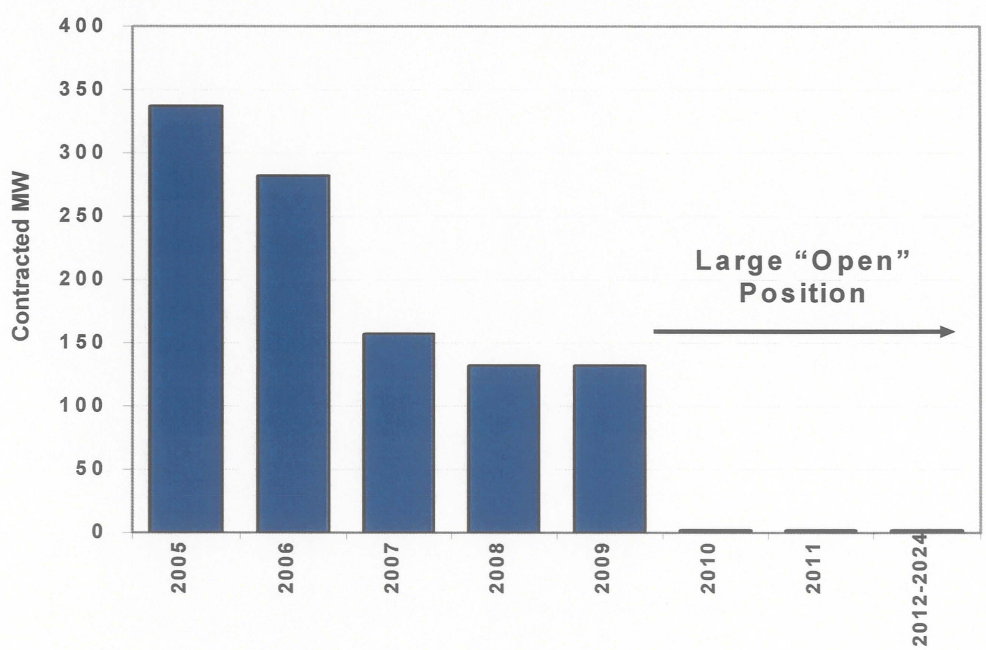
PHASE I: ESTABLISHING MIDWEST'S RISK PROFILE

MIDWEST'S CURRENT SUPPLY RESOURCES

Midwest owns and operates only a small amount of generation, purchasing the vast majority of its capacity and energy requirements via power purchase agreements. The current contract portfolio is dominated by "system participation" contract structures that have historically provided firm generating capacity to meet Midwest's needs[5]. The system participation contracts are based on a specified mix of generating plants (including base load coal, intermediate and peaking resources) and their availability defines how much capacity is available for Midwest and indirectly the energy charges associated with those dispatching units. These types of contract structures have served Midwest well historically and reliability difficulties owing to these contract structures have not been an issue.

Essentially all of Midwest's significant supply contracts will expire by 2010 leaving Midwest with a significant and increasing open-position over the next four years. Bear in mind that Midwest is anticipated to have capacity requirements inclusive of reserves of approximately 319 MW by 2010. A summary of Midwest's growing open position as it relates to contracted capacity is provided in Exhibit 4.

Exhibit 4: Midwest Energy Contracted Capacity by Year



[5] These contracts typically have not carried the commercial responsibility for liquidated damages in the event of default.

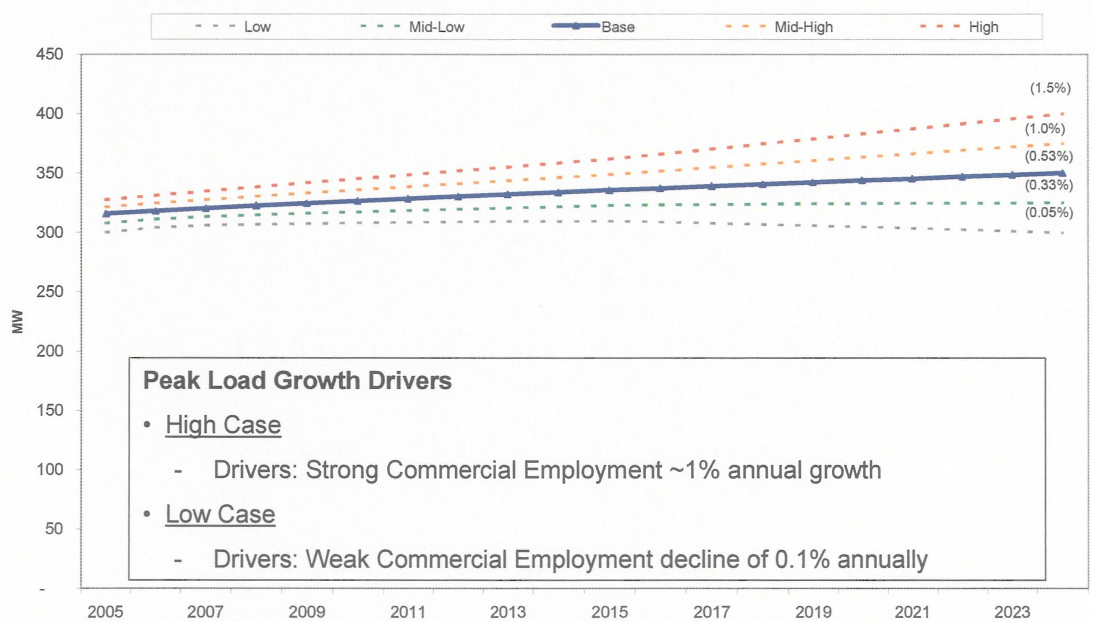
LOAD FORECAST

The estimation of Midwest's future energy (MWh) and peak demand (MW) requirements, via a load and energy forecast was among the first steps in defining Midwest's future supply portfolio. The demand for energy varies through time on an hourly, seasonal, and annual basis. The peak load and energy forecasts are required in the RIRP process to assemble a "most likely" estimate of the Midwest system requirements and to bound the requirements over the long-term planning horizon for the combined "M" and "W" systems including both energy and peak demand.[6]

Peak load for the combined Midwest Energy "M" and "W" systems is forecast to be 316 MW in 2006, growing to 324 MW by 2010. Over the course of the planning horizon (2005 to 2025), peak demand is forecast to grow at 0.53% per year, and approach a level of 350 MW at the end of the planning horizon. This peak load is inclusive of the off-system sales represented by the municipality wholesale load that is currently being served by Midwest.

Exhibit 5 illustrates projected annual growth rates of peak load requirements for the combined Midwest M & W systems over the planning horizon.

Exhibit 5: MWE Peak Load Growth Scenarios in MWh



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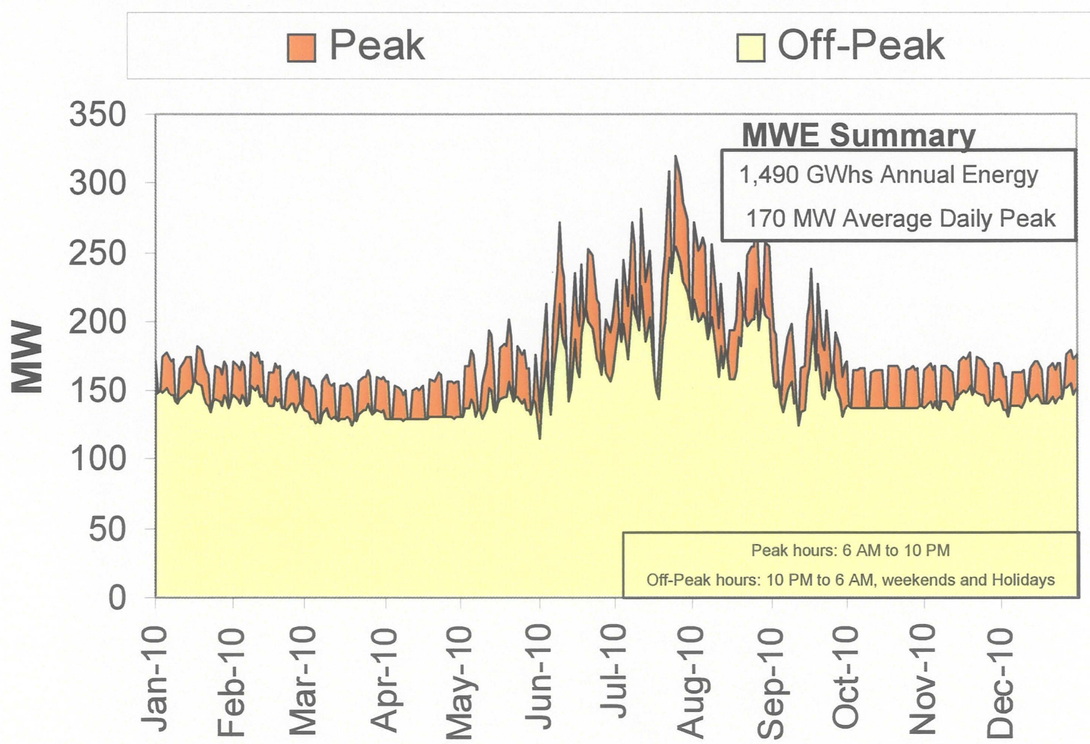
[6] An econometric modeling approach was used in the development of the peak and off peak load and energy forecasts. This approach and the underlying factors associated with the underlying forecasts is fully described in Appendix B to this document. These forecasts incorporate the effect of existing load management, or Demand-side Management ("DSM"), such as the irrigation Time-of-Use rate programs currently in place

Unlike in the short term, where peak load is largely a function of weather (temperature), variation in longer term growth rates in peak load are mainly attributable to demographic factors. To capture variability of long term annual load growth, sensitivities on the base case peak load requirement forecasts were run on the basis of scenarios of commercial employment. Commercial employment ultimately influences population, employment, and the number of households within the service territory. To define the upper and lower bounds of the demand forecast commercial employment was forecast to grow at 1% and -0.1%, respectively. For the high forecast, this band simulates a commercial employment growth rate that has been witnessed during periods of robust economic growth. The lower bound represents a decline in commercial employment associated with the potential for the emergence of a declining population within Midwest's service territory.

A comparison of the peak load to energy forecasts over time indicate that the overall load shape for Midwest customers is likely to remain relatively constant as customer use patterns and the mixture of customer classes is expected to remain stable over the planning horizon. Exhibit 6 illustrates the simulated peak and off peak load profile for 2010.

Exhibit 6: Midwest's Simulated Load Shape for 2010

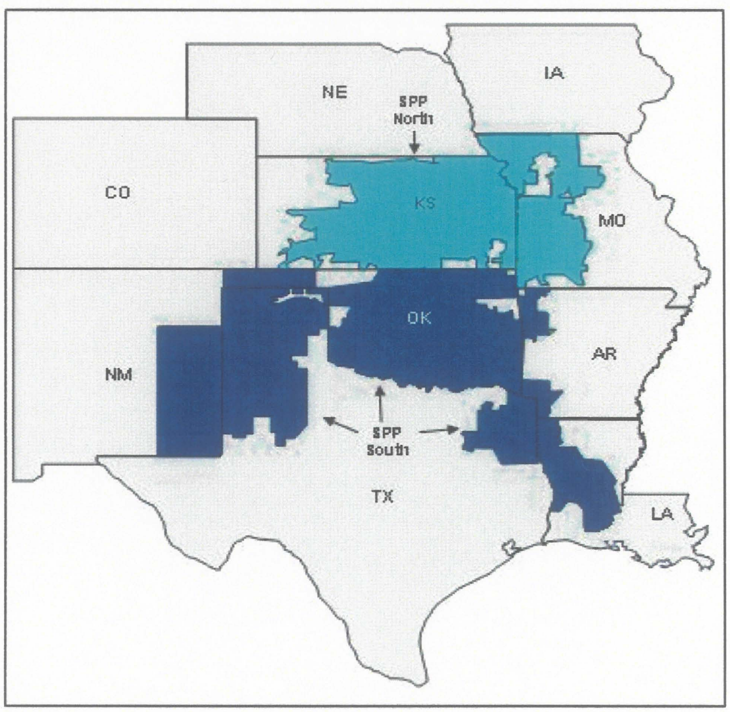


The econometric model used to generate the peak demand and energy forecast for Midwest provides the simulation tool for developing a distribution of demand and energy requirements for Midwest throughout the planning horizon. The uncertainty of Midwest's demand and energy requirements can be bounded throughout the planning horizon allowing the volume uncertainty inherent in serving that load over time to be quantified. The load and energy distributions are a key input for defining Midwest's Risk Profile as described later in the report.

MARKET PRICE FORECAST & UNCERTAINTY

The Southwest Power Pool region as depicted in Exhibit 7 is characterized by a large number of IOU, cooperative, and municipal electricity providers. The SPP system encompasses all or sections of the following states: Missouri, Arkansas, Louisiana, Oklahoma, Texas, New Mexico, and Kansas.

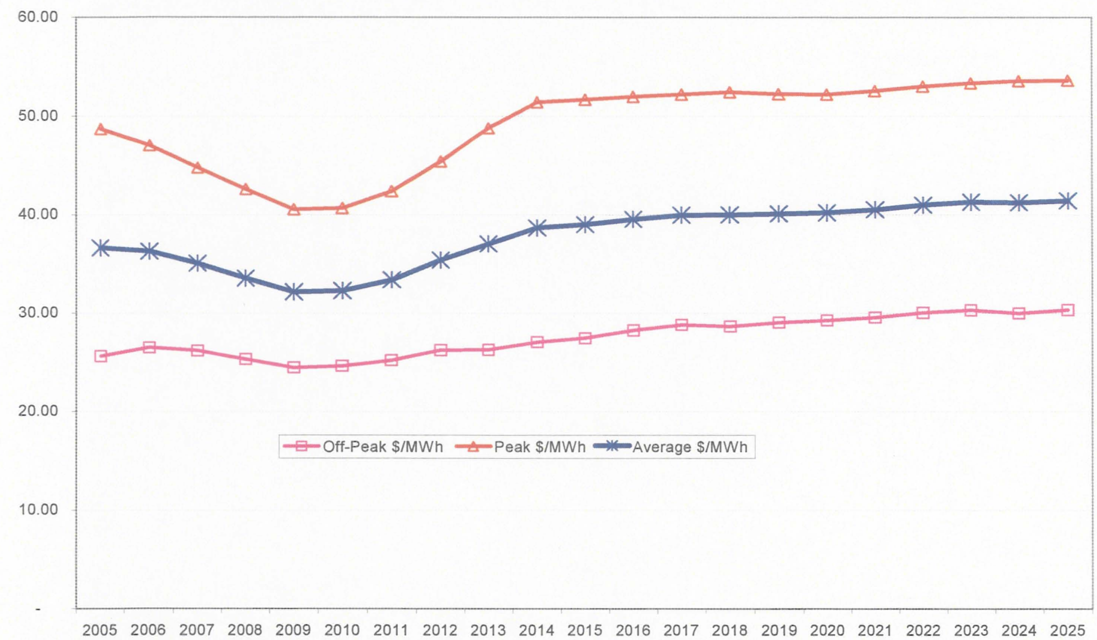
Exhibit 7: Southwest Power Pool Regional Designation



Source: Pace Global.

The approach used for developing the base case forecast explicitly considers the primary drivers of market prices in SPP, including gas prices, coal prices and the relationship between supply and demand. CEMAS is an integrated resource-planning tool employed by Pace Global that is designed to simulate the deregulated power generation market and to project market-clearing prices for both capacity and energy under based on a defined set of assumptions. The base price forecasts for average, peak and off-peak prices over time are shown in Exhibit 8.

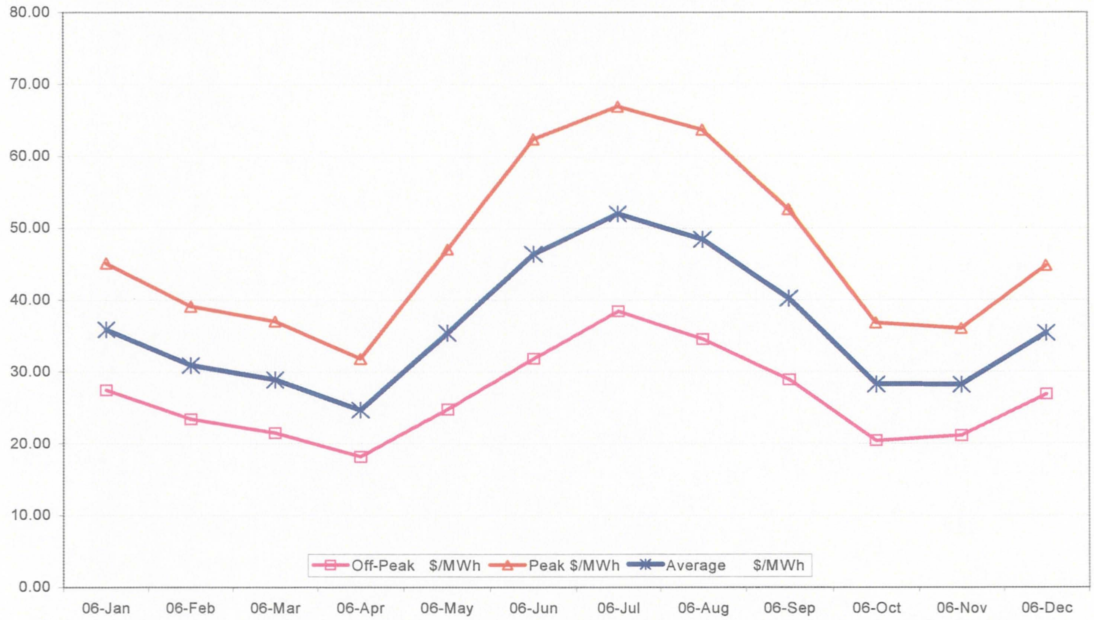
Exhibit 8: SPP Market Peak, Off-Peak and Average Forecasted Prices (2005-2025)



Forecasted prices for power are expected to drop somewhat between now and 2008 before increasing again over the long term. The near to mid-term price drop is most attributed to an expectation of lower gas prices, when significant quantities of LNG supplies penetrate the U.S. market over the next several years. With gas on the margin in peak hours, the declining trend in power prices is closely linked to expected decline in gas prices in the intermediate term. Off-peak prices are generally trending to higher levels, which is a reflection of both higher prices for coal and increasingly gas generation being on the margin for a portion of the off-peak periods (while gas prices are declining they are anticipated to be higher than coal prices, raising off-peak prices overall when gas is on the margin).

There is a good deal of seasonality associated with the SPP market, which is reflected in Exhibit 9. Seasonal price levels are important in the determination of an appropriate contract portfolio as Midwest's peak load requirements coincide with the summer periods when prices are at their highest.

Exhibit 9: SPP Market Price Forecast for 2006 (Monthly Pricing)



Regardless of the robustness of the forecasting methodology, forecasts will always differ from the reality of the market especially over a long term planning horizon. Therefore, relying on a single point forecast or even a handful of alternate cases is simply inadequate for long-term resource decision making. The RIRP analytical process addresses the inherent inaccuracies of future forecasts by incorporating a complete probability distribution of market prices from which to make resource decisions. On the basis of the commodity price and SPP load forecasts and their inherent uncertainty as defined through statistical techniques, the range of uncertainty in power prices is determined through multiple simulations of the CEMAS forecasting tool. The primary drivers of the uncertainty in power prices (referred to as "stochastic" nature of prices) is determined by simulating the market prices under a variety of coal, gas and load conditions and the correlation of these price drivers. Once the distribution of prices is simulated the confidence intervals for those prices throughout the planning horizon can be determined.

The distribution of market prices for the SPP region is utilized to quantify the price implications for alternative portfolios under consideration. This provides tremendous insights from the perspective of resource planning. Moreover, it is the inclusion of the stochastic characteristic of prices that underpins the RIRP approach as it integrates the inherent risk of the market into the decision making process providing a much more robust methodology than traditional resource planning techniques.

The projected power prices and associated confidence intervals (i.e. price distributions) for SPP-North are shown in Exhibit 10.

Exhibit 10: SPP Market Price Distributions for 2006 to 2025

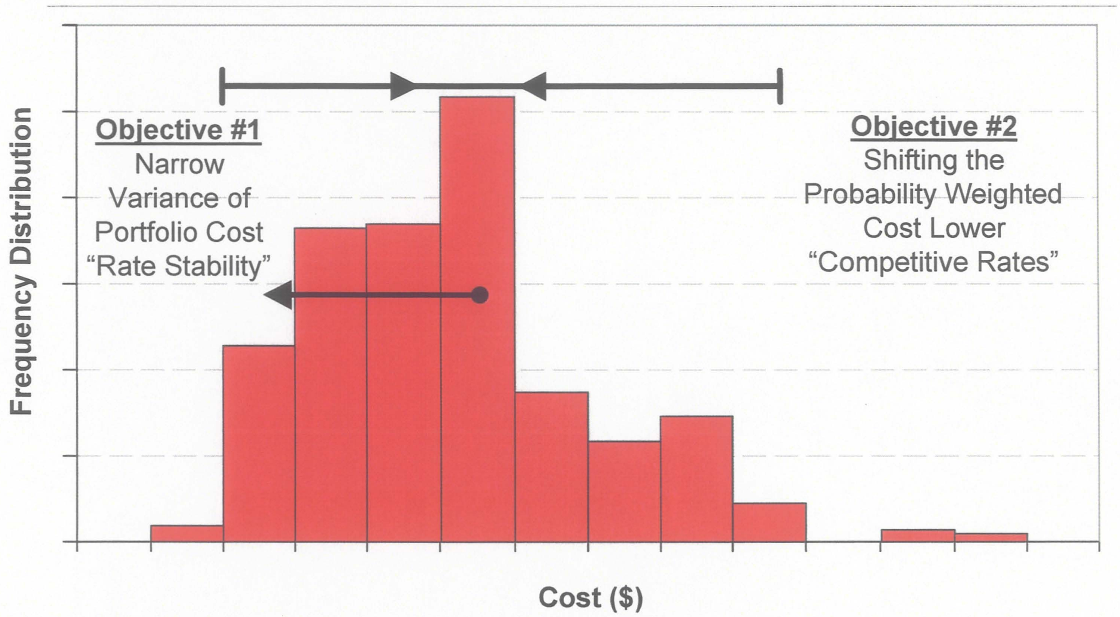
The SPP market price distributions are a key input for defining Midwest's Risk Profile as described in the following section.

MIDWEST RISK PROFILE

As described previously, Midwest's *Risk Profile* for every year of the LRRP considers the uncertainty of the customer load (and energy) requirements as well as the price uncertainty associated with serving that load and is presented as a probability distribution of costs.

Exhibit 11 reinforces a fundamental concept of the RIRP process and its objectives. Once you have developed a utility's cost distribution for supplying its customer base through RIRP analytics, the straightforward objectives are 1) Narrow the variance of portfolio cost, e.g. achieve "Rate Stability" and 2) Shift the expected cost lower, e.g. provide "Competitive Rates" to your customers by choosing resource options that best achieve the objectives. The RIRP approach allows for straight forward comparisons and consideration of trade-offs across alternatives.

Exhibit 11: RIRP Portfolio Design Approach

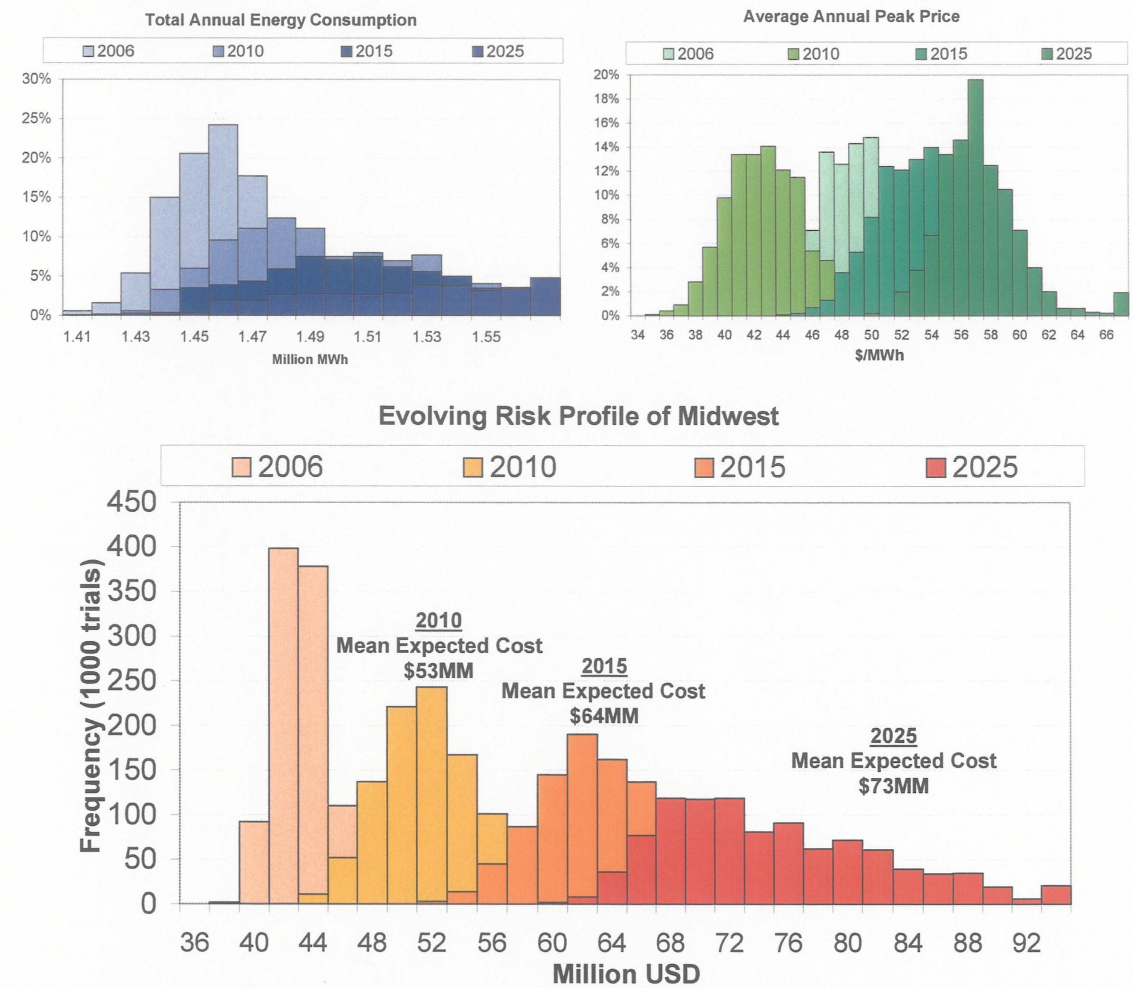


We stress the fundamental concept of the Risk Profile and its application so that the rationale and recommendations contained later in the report are understood from a common perspective.

Midwest's Risk Profiles in years 2006, 2010, 2015 and 2025 are shown graphically in Exhibit 12. These years were chosen as representative over the long-term planning horizon and show a clear trend in Midwest's Risk Profile. The components of the Risk Profile, distributions of customer energy requirements (as extrapolated from alternative customer demand scenarios) and prices of electricity (as defined by the probability distributions of price), are provided for clarity.

The *Risk Profile* of MWE is defined by the quantity of power that is anticipated to be needed over time and the range of prices that MWE will have to pay for that power over the same period. The combination of quantity and price defines the system cost and underlies the rates that will be passed on to the members. Both the volume and price of power required in the future are not known but can be defined/bounded by statistical techniques, which allows the probability of various outcomes to be considered when making long-term strategic supply decisions. For MWE, as with most utilities, the risk of higher costs grows with time as the volume uncertainty grows (due to demand growth and long-term demographic changes) and pricing is more uncertain over time (due to market volatility and contract expiration).

Exhibit 12: Midwest's Risk Profile 2006, 2010, 2015, and 2025



As shown in Exhibit 12, Midwest's 2006 Risk Profile has the lowest expected cost and the lowest cost variation as characterized by its position on the left of the cost axis and its relatively narrow distribution. This is as expected, given that customer demand and energy requirement is relatively well defined for the 2006 period relative to years further into the future[7] and Midwest retains approximately 275 MW of contracted capacity limiting the exposure to spot market supply pricing. The broader the distribution, the greater the risk that Midwest will be exposed to higher power procurement costs, and as a result, higher rates for its members. Midwest's expanding Risk Profile over the planning horizon of the LRRP indicates that its expected cost

[7] Customer demand and energy growth (or decline) are largely determined by changing customer demographics. Demographic trends typically require significant time to develop and lead to alternative load growth (or decline) scenarios. The further out in the future the more time the demographic fundamentals of the Midwest's customer base has to change and for the forecasted customer load to be materially different from base case projections.

and cost variability will become increasingly undefined in the future and that supply options must be addressed for prudent planning and management. The Risk Profiles for 2010, 2015 and 2025 trend towards both higher expected supply costs and increased cost variability. As shown in Exhibit 12, the expected electricity supply costs in 2006 are approximately $44 million and will increase to $53 million in 2010 and $73 million by 2025. Over the same period, the variability of cost as defined by the range of the cost distribution is over 2.0 times greater. Midwest, by undertaking this study, is proactively considering the implications of its future Risk Profile and planning accordingly to address its supply needs.

In the next section of this report, alternative resource options are identified that are consistent with Midwest's corporate objectives and improve their future Risk Profile.

PHASE II: RESOURCE OPTIONS

CONSIDERATION OF FUTURE SUPPLY RESOURCE OPTIONS

To this point in the RIRP analysis, we have:

- Defined/bounded the capacity and energy needs of Midwest,
- Analyzed Midwest's current supply plan, generating resources and the expiration of the majority of their existing supply contracts,
- Established the expected SPP market prices over the planning horizon and the probability distribution of those prices over time,
- Developed Midwest's Risk Profile over the planning horizon, and
- Implicitly considered the cost profile of various supply/generation resources that could form the basis of Midwest's future supply portfolio.

Phase II of the RIRP analysis is initiated by considering supply resource options that can reasonably meet Midwest's business objectives and importantly, are commercially feasible to implement. The resource options available to Midwest vary and span the breadth of those resource options available in the overall market including base load generation primarily coal fired plants, intermediate capacity via combined cycle natural gas generation, peaking capacity via combustion turbine or older gas-fired steam generation, and renewable wind generation. These various types of generating resources constitute the resource mix available in the SPP market and available to Midwest through a variety of contractual and/or ownership structures. The primary goal of the LRRP is to define the supply portfolio, as defined by the amount of each type of generation, which best meets Midwest's business objectives.The specific contractual arrangements that Midwest may choose to employ to obtain these resources are varied and are beyond the primary objectives of this study.

The following characterizes the resource options by type that Midwest; given its current enterprise size, financial capabilities, and risk perspective, is likely to consider as it implements its long-term resource portfolio:

- *Base Load Generation:* The SPP market has two primary forms of base load generation, nuclear and coal fired capacity. Coal fired resources make up over 50% of Midwest's current supply contract portfolio. Midwest has the ability to contract and/or take an equity position in base load coal resources. Base load capacity is characterized by relatively high capacity (or fixed) costs and relatively low variable (or energy) costs. This is especially true when comparing coal based energy charges vs. natural gas based energy charges in today's high priced natural gas environment. Nuclear capacity was not considered as a viable option for Midwest given its relative location to the Midwest system, the existing commitments, and the commercial risk associated with nuclear power.

- *Intermediate Capacity via Combined Cycle Gas Turbine (CCGT):* The SPP market, in particular SPP-South, has significant intermediate generation capacity in the form of CCGT capacity. The dispatchable heat rate for these units is near 7.0 MMBtu/MWh and represents modern, efficient gas turbine technology. As such, the capital (or fixed) costs are typically within the range of base load and peaking capacity and the variable (or energy) charges are the lowest available from natural gas fuel.
- *Peaking Capacity via Combustion Turbine or Gas-Fired Steam:* Peaking capacity is characterized by relatively low capital (or fixed) costs and relatively high variable (or energy) costs. Peaking capacity in the SPP market is provided via gas fired combustion turbines or older steam fired generation, each typically at a heat rate in excess of 10.0 MMBtu/MWh.
- *Renewable Resources – In Particular Wind Generation:* Wind generation is typically secured on the basis of contractual commitments between a wind project developer and a load serving entity ("LSE") such as Midwest. Wind supply contracts are typically take-or-pay commercial contracts which provide intermittent and highly variable energy sources and displace other scheduled energy from the supply portfolio.[8]. Capacity value is very limited from most wind generation, both from regulatory and system operations perspectives, and therefore the cost is on the basis of energy produced.

Phase II of the RIRP analysis considers these various resource options in light of the cost distributions of gas, coal, system demand and the correlated power prices to arrive at an interim resource portfolio that is consistent with Midwest's business objectives. There are a myriad of resource portfolios that can be constructed from these options, and the RIRP analysis includes optimization techniques to narrow and then fine tune the optimal resource portfolio. These results are detailed later in the report.

The commercial and contractual arrangements to secure Midwest's supply portfolio can vary and may include:

- Power purchase agreements (contracts),
- Tolling options whereby capacity payments are made to secure the rights to dispatch the generation with the obligation to supply the fuel for the plant,
- Participation as an equity investor in an existing or new power plant, and/or
- Exclusive ownership and operation of a generation resource.

Focusing on the last bullet, given Midwest's size and risk preferences it is unlikely that Midwest would consider exclusive ownership of any generation resource other than possibly a peaking power plant in its own service territory. In general, Midwest would have a strong preference to secure its supply portfolio through contractual, tolling and/or equity participation agreements and

[8] The wind project's total generation can be split amongst various LSE's each obtaining a % of the output of the overall project as agreed to in the contractual terms of the power purchase agreement.

would prefer to avoid owning and operating generation. This strategy limits Midwest's operating risk, reduces its staffing needs and the associated overhead costs and preserves future resource flexibility. This resource strategy is well suited to relatively small scale load serving entities ("LSE's") like Midwest. In the future, based on recent emerging trends in the regional transmission system the development of new peaking generation in the Midwest service territory may be necessary for reliability and economic considerations and cannot be ruled out entirely. These emerging transmission related issues are detailed later in the report.

Additionally, demand side management options were also considered as a component of the resource supply portfolio as detailed in the following section.

Demand-side Management Options Analysis

Evaluating the potential of demand-side options is appropriate in the context of a long-term resource planning study. In many utility systems demand side management and peak shaving programs (collectively DSM programs) can provide competitive and predictable system peak demand and/or energy savings.

DSM program options include both active and passive programs. Passive programs generally include information programs that seek to inform customers about energy use as a customer service, including advice on how energy can be used efficiently. They may affect the extent and manner of customer energy use, but energy impacts of information-only programs are usually quite small owing to the low-key approach. Midwest already provides general energy information to its customers in its monthly newsletter and provides a number of low cost energy services for its customers. Midwest provides customer specific information about the home or business in order to use energy more efficiently; i.e., energy audits, HVAC sizing, walk-through inspections, etc. Midwest has provided almost 1500 such services from 2000 through 2004. In addition to any energy efficiency improvements from these programs, Midwest's customer satisfaction surveys indicate that the customers perceive more value for their energy service. Midwest also periodically conducts energy training workshops for employees, HVAC and home building contractors, and the general public. The following topics have been addressed in recent years: thermal shell integrity, furnace safety, combustion air, carbon monoxide, and general efficiency tips.

Active DSM programs, as opposed to information programs, are intended by utilities to explicitly motivate customers to modify the way they use energy by offering price signals, linked financial incentives and/or other program services. These DSM programs can include specialized rate design as has been implemented for Midwest's TOU rate for irrigation customers.

In order to determine if active DSM programs have the potential of being implemented and reduce the reliance on externally sourced supply options to meet its customer load obligations, Pace Global evaluated the following:

- Analysis of Customer Class load profiles
- Review of potential applicable DSM programs
- Analysis of the expected marginal cost of capacity and energy
- Applying a Rate Impact Measure (RIM) analysis for those programs identified as having potential

The Rate Impact measure (RIM) test is commonly used to screen the cost and benefits associated with DSM programs. Under the RIM test, any DSM program with a ratio of DSM programs cost to program savings of less than 1.0 should not be pursued. The results of the RIM test provides an indication whether Midwest can offer a DSM program alternative to the consumer that will not adversely affect the rates for customers, i.e. all consumers benefit, including DSM program participants and non participants.

Two customer classes were initially identified as priority targets for DSM opportunities – The Residential Service Class and Irrigation – Frozen/Incidental Service Class which represent over 40% of the coincident peak demand for the Midwest system. The types of active DSM programs evaluated for Midwest's Residential customer class included:

- Residential Weatherization
- Direct Load Control
- Efficient Lighting Retrofits

For the irrigation customers an irrigation/pumping efficiency program was evaluated for Midwest's non-time of use ("TOU") Irrigation Customer Class based on its potential to deliver reductions in peak summer demand and energy consumption.

Based on the RIM test analysis none of the DSM programs identified above passes the RIM test. In fact, the RIM test resulted in ratios in the range of 0.04 to 0.15 for those programs that were considered. This is well below the RIM test screening threshold value of 1.0. The principle reason these programs do not pass the RIM test is that the value of capacity in SPP is relatively low currently, and is expected to remain so for the next several years through 2013. Therefore, these DSM programs should be re-evaluated in the future as the value of capacity in the market increases. It is also important to note that even in the event of increased power prices, Midwest will be challenged to overcome the administrative costs of managing and implementing DSM programs given its relatively small customer base. Midwest's past commitment to DSM programs through information programs and rate design is commendable given their size as a utility. Based on the results of the initial RIM test, DSM programs were not considered as a component of the Midwest's overall resource supply portfolio.

A complete explanation of the DSM evaluation is contained in Appendix C.

PORTFOLIO SELECTION ANALYSIS

Following careful consideration of the resource options that are feasible, available, and consistent with Midwest's business objectives, the Phase II analysis proceeds sequentially as identified below:

- *Step #1*: Screening optimization analysis to gauge the relative weighting of various portfolio components.
- *Step #2*: Develop a continuum of portfolios from 0% to 100% base load capacity.
- *Step #3*: Analyze and plot the various portfolio results on the basis of mean cost and standard deviation, i.e. the portfolio's performance across the metrics of cost competitiveness and rate stability.
- *Step #4*: Consider and discern the trade-off between the two metrics and align with Midwest's business objectives.

First, Pace Global performed a screening level optimization analysis in order to discern the relative weighting of various portfolio options. The optimization screen was developed by analyzing the least cost supply portfolio under a variety of price scenarios from low to high across the expected price distribution of the SPP market. As depicted in Exhibit 13, in a very low price scenario, i.e. the 1% price distribution case, the least cost portfolio is defined as 0% coal, 45% intermediate CCGT and 55% peaking GT capacity.

Exhibit 13: Portfolio Screening Level Optimization Results

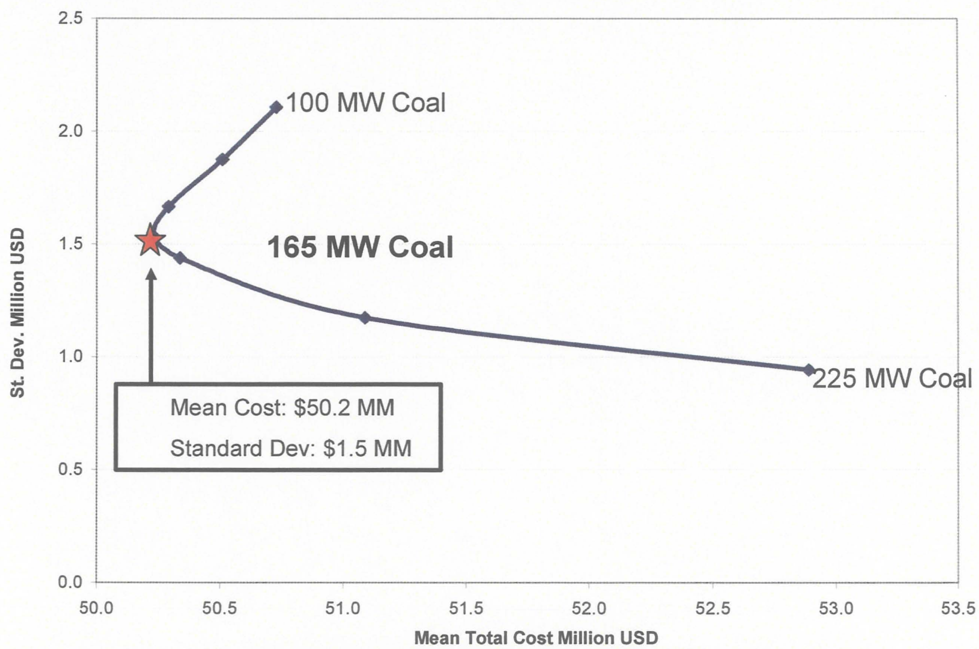
Price Case	Coal % Portfolio Capacity	CCGT % Portfolio Capacity	GT % Portfolio Capacity
1%	0%	45%	55%
5%	0%	50%	50%
25%	0%	50%	50%
50%	**45%**	**5%**	**50%**
75%	**45%**	**5%**	**50%**
95%	**50%**	**5%**	**45%**
99%	50%	5%	45%

Prudent planning cases given MWE's business objectives (50%, 75% and 95% price cases)

This intuitively makes sense as the higher fixed costs associated with coal capacity are not justified in a low market price environment. Moving towards the expected SPP price scenario, i.e. 50% price distribution case, the least cost portfolio is achieved by approximately 45% coal, 5% CCGT intermediate and 50% peaking GT capacity. This portfolio mix remains stable throughout the balance of the price distribution cases. Importantly, from a prudent, utility planning perspective the expected price case (50% case) through the highest price case (99% case) is where the resource planning focus should generally be. This is especially true given Midwest's business objectives of maintaining rate stability and achieving reasonably priced power to its members.

Step #2 of the analysis takes the screening level insights and refines and more rigorously analyzes the portfolio mix. A continuum of coal based portfolios were developed from 100 MW of coal (~33% of annual peak capacity demands) to 225 MW (75% of annual peak capacity demands) bracketing the initial, screened portfolio of 45-50% coal. Each supply portfolio along the continuum was analyzed in the context of the full SPP price range distribution that was developed for the analysis. Each portfolio was evaluated on the basis of portfolio supply costs and portfolio cost variability; i.e. price competitiveness and price stability. Each portfolio along the continuum was complimented by an amount of peaking and/or intermediate capacity such that a constant total capacity was maintained. The summary results of this analysis are presented in Exhibit 14 and represents Step #3 of the portfolio selection process.

Exhibit 14: Comparison of Expected Costs vs. Cost Variability



Once this analysis was completed, an insightful comparison and dialogue was had with Midwest's senior management which is defined as Step #4 in the portfolio selection process.

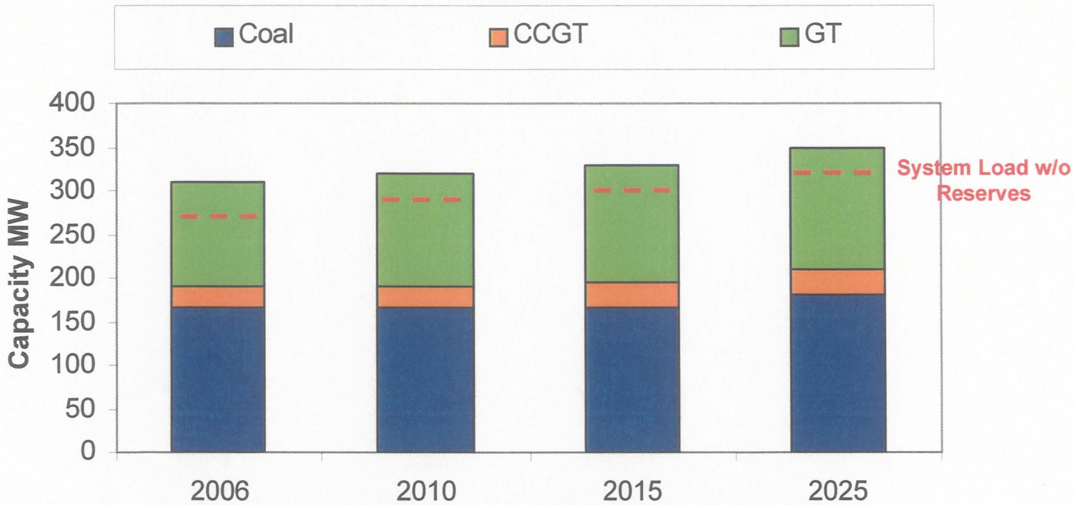
The point on the continuum that was deemed the optimum portfolio in balancing supply costs and cost variability was a portfolio that contained approximately 165 MW of coal, 25 MW of CCGT intermediate, and 135 MW of GT peaking capacity.

The relative performance of multiple portfolios was analyzed to ensure this initial recommendation was validated. Consideration was given to the cost impact of unit outages and detailed consideration of the trade-offs between low cost and cost variability. Any point greater than 165 MW could conceivably be a better alternative if Midwest placed a higher priority on price stability than on cost level. The risk – return trade-off for higher levels of coal in the portfolio create improved price stability but at a higher expected cost.

Moreover, consideration was given to Midwest's primary charter to serve its members reliably and cost effectively and unwillingness to have a significant long position that is not covered with Midwest's load serving obligations. This consideration and incremental analysis indicates that Midwest could reasonably add an additional 10 MW to 20 MW of incremental coal capacity to the supply portfolio reduce the expected cost of supply to its members and remain consistent with its membership, load serving charter and business objectives.

The same analysis was performed over various years throughout planning horizon and the recommended portfolios, subject to the Phase III quantum analysis, are summarized in Exhibit 15.

Exhibit 15: Phase II – Supply Portfolio Recommendation Over Planning Horizon



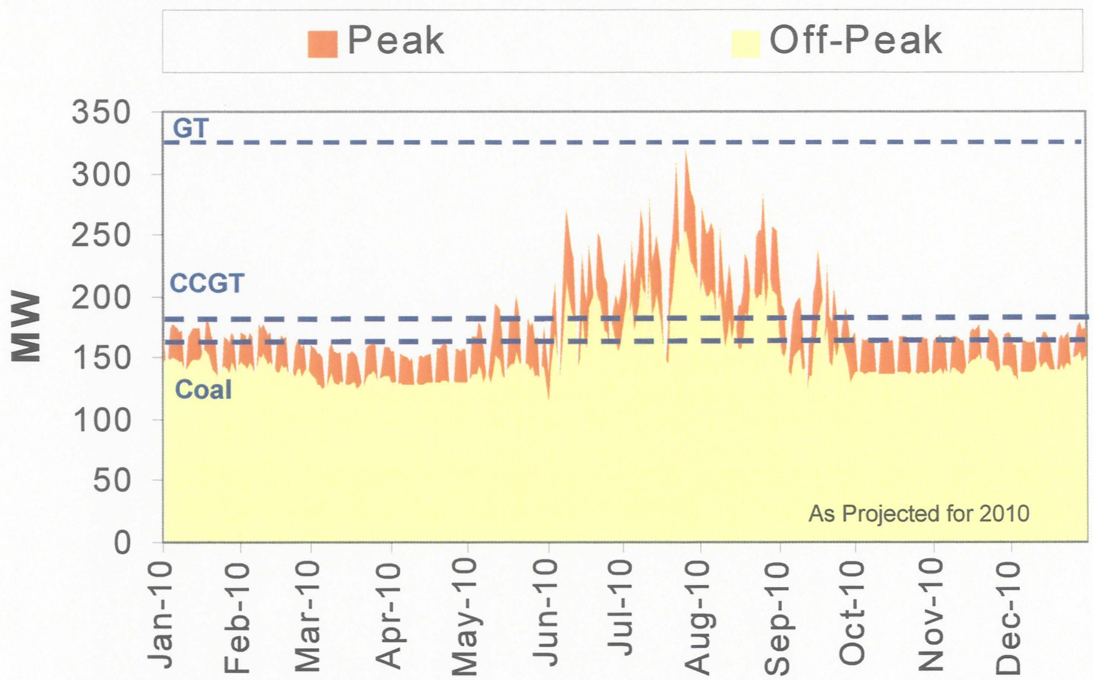
Year	2006	2010	2015	2025
% Coal	53%	52%	50%	51%
% CCGT	8%	8%	9%	9%
% GT	39%	41%	41%	40%
Firm System Capacity (MW)	275	281	288	304
Firm System Capacity + Reserves (MW)	312	319	328	346

Note: Midwest's reserve requirements are defined in the following section.

Please note the stability of the recommended supply portfolio over the planning horizon. This is ideal from a planning perspective as long-term capacity commitments, assuming they are commercially available and attractive, can be undertaken with confidence by Midwest's management with the expectation that the resource portfolio will meet its business objectives over the long-term. Finally, the projected annual load for both peak and off-peak periods were overlayed against the supply portfolio recommendation to ensure that the results were intuitively correct. Exhibit 16 depicts that overlay for 2010[9].

[9] Inclusive of "city" load which include the municipalities that Midwest serves via contract currently.

Exhibit 16: Portfolio Mix Overlayed to Midwest's Projected Load Profile (2010)



As expected the base load coal capacity is being utilized near 100% of the time in peak periods and highly utilized in off peak periods throughout the year. The CCGT capacity is appropriately being utilized filling system demand primarily June through September and the peaking capacity, with its low associated capacity costs, is being utilized primarily in the summer to meet peak demands at a low annual capacity factor.

With the initial portfolio recommendations established, the following section evaluates the appropriate reserve level for Midwest and the separate issues of transmission availability.

Looking forward to the Phase III Quantum Analysis, this initial portfolio is "stress tested" to ensure that the portfolio recommendation remains valid under certain unlikely, but potentially significant changes to our fundamental assumptions.

RESERVE REQUIREMENTS & RELIABILITY

The determination of the appropriate reserve margin for Midwest Energy is based on a combination of considerations including generally accepted industry practices, the Southwest Power Pool ("SPP") criteria, the economics associated with carrying incremental capacity and considerations of other factors that influence the reliability of the supply portfolio. These considerations are critical to capacity planning decision making.

Reserves – Regulatory & SPP Adequacy Perspective

The technical and regulatory elements of the reserve margin criteria to be considered in the Midwest Energy long-range resource plan are considered in this section of the report; i.e., Midwest is required to meet its maximum retail customer demand, plus firm sales commitments at the time of peak demand, plus the regulated minimum reserve requirement. SPP has determined that if all load-serving entities carry enough capacity, either through contracts or physical resources, to meet their peak load responsibility plus a minimum reserve margin of 13.6%, generation reliability within SPP will be adequate, meeting the reliability standard of a loss-of-load probability of one day in ten years. This SPP standard is consistent with that used predominantly throughout the United States.

The 13.6% minimum reserve requirement represents a regulatory requirement – a load supplying entity can carry more reserve if other considerations and the economics justify it. The one day in ten year criteria planned to by SPP implies a very high level of reliability that is judged to provide a reasonable trade-off between the additional costs to carry more capacity and the expected gain in terms of value of lost load. In other words, carrying capacity in excess of the one day in ten year criteria may increase reliability, but the cost associated with the additional reliability exceeds the perceived value to customers.

It is important to recognize that carrying higher levels of reserves for a small load serving entity such as Midwest will have little impact on its supply reliability as it is a small component of the overall system. SPP currently has 55,000 MW of capacity, with reserves of 32% in 2006, declining to 16% by 2013 under current load growth projections. If Midwest were to contract for capacity in excess of its minimum reserve requirement, it must be justified on the basis of economics and business objectives rather than reliability. Midwest's minimum reserve requirement is approximately 40 MW. Even if Midwest were to double this to 80 MW (i.e., carry a 27% reserve margin), it would have a negligible impact on the reliability of the SPP market[10].

Pace Global reached the following conclusions with regard to the minimum regulated reserve margin requirement in the context of the RIRP analysis:

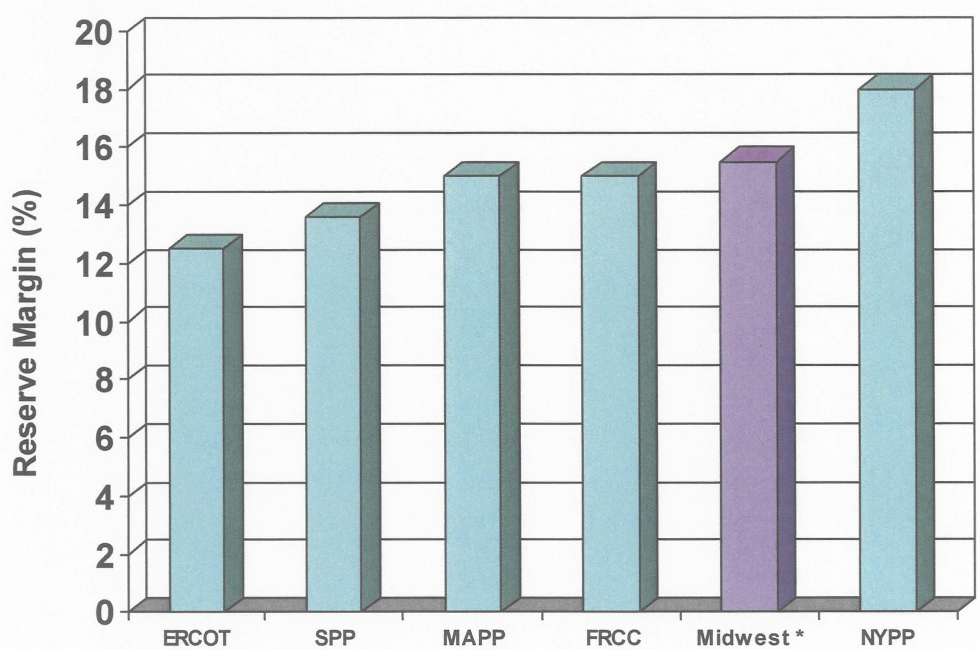
- Midwest must carry a minimum reserve margin consistent with the SPP requirement that each of its load-serving members carry a generation reserve margin of at least 13.6% (equivalent to a capacity margin of 12%).
- Currently, neither the Kansas SCC nor SPP have any published plans to change the reserve margin criteria. There are no current discussions at ongoing SPP meetings to change the reserve margin.

[10] It is important to note that if a large-scale generation shortage occurs, SPP will declare an emergency state, and will take control of the system, doing whatever is necessary to maintain supply. Financial rights to capacity, and even ownership rights, have no bearing during a system emergency.

- There appears to be no justification for Midwest to carry a specific location-based reserve margin that is different from the 13.6% requirement for all SPP load-serving members.
- Most jurisdictions within the U.S., including SPP, use a reliability criteria based on expected loss of load of one day in 10 years. This translates into different reserve margins depending on the characteristics of the market; i.e., interconnections, size and reliability of generating units, etc. For SPP, this translates to a reserve margin of 13.6%. There does not appear to be any movement within the industry to a more or less conservative reliability standard at the present time.

Midwest has met its reserve requirements through a variety of firm contracts, associated firm transmission, and owned peaking generation. The current Midwest reserve margin is approximately 15%, slightly above that required by SPP. A comparison of Midwest's minimum reserve requirement to that in other US jurisdictions is shown in Exhibit 17.

Exhibit 17: Comparison of Required Reserve Margins (%)



* Midwest Energy historical reserve margin.

The SPP reserve requirement of 13.6% is low in absolute terms relative to the reserve requirement in other reliability councils. It is, therefore, conceivable that the SPP reserve requirement might increase in the future to a level more in line with that for the industry as a whole; especially if a significant outage owing to generation deficiency were to occur, regulatory authorities might consider increasing the reserve margin. From the perspective of reserve margin and its relationship to reliability, Pace Global concludes that Midwest has been appropriately contracting for reserves and could actually reduce reserve levels slightly, achieve the SPP criteria and not impact the standard of reliability that Midwest's customers are accustomed to.

Reliability – SPP and Localized Transmission Perspective

In the United States, generation events typically account for less than 1% of all end-use customer outages; transmission events account for about 20%, and distribution events account for about 80% of customer outages. Hence, regulated reserve requirements from a capacity adequacy perspective are focused on the market and regional capability to meet load demands. Because generation and transmission outages are often more widespread and long-lasting, with far greater economic consequences, they are given much greater consideration than distribution reliability. The evaluation of SPP regional transmission and more localized transmission issues is the focus of the following sections of the LRRP and considers the reliability and implications of the transmission system's capability to serve Midwest's future needs. For an entity such as Midwest, that plans to rely predominantly on capacity resources outside of its control area, transmission system capability, the consideration of developing constraints and the commercial and reliability implications of the local and regional transmission system is a primary concern in implementing a sound resource plan.

SPP Regional Transmission Reliability

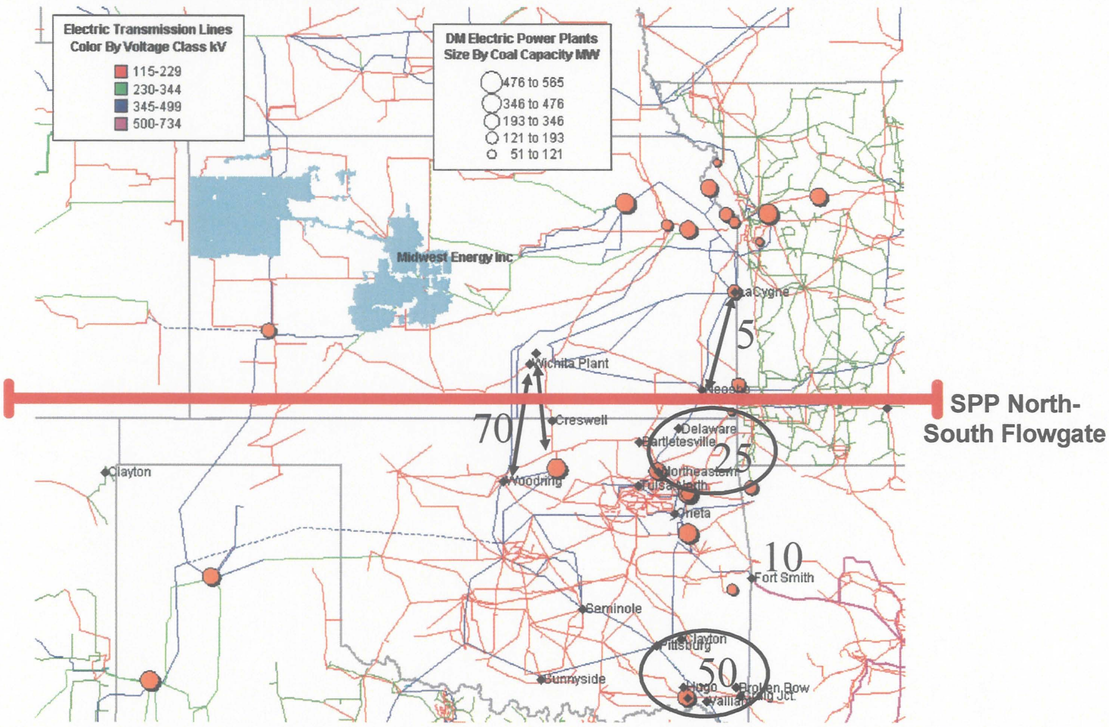
Pace Global evaluated the recent performance of the regional SPP transmission system to provide insights into the region's overall reliability and any potential implications for Midwest. This evaluation also provides insights as to certain transmission paths that may prove difficult to secure when implementing the recommended resource supply portfolio. Although the specifics of Midwest's future transactions are not yet known, recent performance of the transmission network in SPP is typically indicative of future performance and is appropriate in the context of a resource planning study.

In this regard, recent SPP transmission loading relief (TLR) events and their locations were evaluated to determine which transmission paths within SPP have a history of constraints, overloads or related reliability issues. TLR events include the following levels, with level 6 being the most severe:

1. Notification of a Potential Problem
2. Limits on Interchanges
3. Reallocation or Curtailment of Non-Firm Transmission Service
4. Reconfiguration of the Transmission System
5. Reallocation or Curtailment of Firm Transmission Service
6. Emergency Actions Including Load Shedding or Voltage Reduction

Pace Global's evaluation of SPP TLR events since the beginning of 2003 are summarized in Exhibit 18.

Exhibit 18: SPP TLR Events Summary



As indicated in Exhibit 18, SPP's TLR events are primarily located between SPP-North and SPP-South (Kansas and Oklahoma). Few TLR events have taken place between Midwest's service territory and the larger generation resources located to the east from which Midwest might purchase power in the future.

Based on this macro-regional perspective, the transmission necessary to support Midwest transactions appears to be reliable and adequate. This indication is further supported by the fact that SPP's planning studies do not indicate any potential problems arising in the future and there are no current plans to upgrade transmission to bolster SPP-North intra-regional transmission capacity. Despite the SPP regional macro perspective suggesting that the transmission system is adequate and will likely perform reliably, Pace Global is aware of more localized, anecdotal information related to transmission availability in central and western Kansas that is a growing cause for concern for Midwest. The more localized transmission availability concerns are considered in the following section.

Recent Requests for Firm Transmission

As stated above, the historical transmission reliability and adequacy analysis applies to the regional macro perspective and may not be reflective of more localized issues. In fact, transmission availability is a growing concern for Midwest.

Midwest relies on capacity resources outside of its control area and the use of firm network transmission service to deliver the electricity to its control area for distribution to its customers. As such, Midwest routinely makes firm transmission requests through the SPP, as the regional transmission coordinator. Recently, several of the requests for firm transmission service have been turned down by SPP, or approved on condition that Midwest pay significant costs for generation re-dispatch. These requests have included modest capacity requests of approximately 25MW, which indicates the certain transmission paths are at capacity on a firm basis. In attempting to reconcile this evidence of developing transmission constraints with the more positive regional SPP perspective, we believe that the transmission paths connecting western and eastern Kansas have not been receiving the attention of SPP given the limited number of transmission service requests. And that SPP is likely focusing on the larger reliability concerns that exist between SPP North and South. Furthermore, SPP may not consider the Midwest transmission issues a reliability concern as the requests can be managed through uneconomic dispatch or other means.

Midwest must consider these costs when implementing the resource recommendations contained in the LRRP. As Midwest subsequently negotiates contracts with base load capacity suppliers, likely to be supplied in part from coal generation resources to the east, transmission availability and cost must be considered in addition to the cost of capacity and energy to capture the total costs of the resource option. Another complicating factor to this capacity evaluation and negotiation process will be the protracted time it takes SPP to consider a firm transmission request. Transmission requests are taking as long as one year for a definite response which will likely extend the contracting and implementation of the recommended resource plan.

Depending on the outcome of the transmission requests and the associated economics of securing firm transmission, Midwest cannot eliminate the potential option of adding peaking resources to its control area. Having generation facilities located within the Midwest system certainly improves reliability regardless of ownership or title to the capacity. If a transmission outage was to occur cutting off a significant import path, this generation can be operated to supply load until the transmission problem is corrected. By adding new generation to its system, or by increasing transmission into its system, Midwest can improve reliability and/or may be able to better control its transmission investment and/or related re-dispatch costs. These actions, if required, have associated costs which can be significant. The capability of the more localized transmission system which interconnects Midwest to the balance of the SPP resources will be an important factor in implementing the recommended resource plan.

Summary

The SPP market is anticipated to operate reliably in the future. Midwest, by carrying the minimum reserve margin of 13.6%, will achieve its regulatory requirement and should expect consistent reliability. Contracting for reserves in excess of the minimum regulatory requirement will not necessarily, in and of itself, improve reliability but will add cost to the supply portfolio. Based on the evolving issues with localized transmission system that Midwest relies on to support its capacity needs, the implementation of the recommended portfolio may need to be modified in terms of capacity location, transmission investment and/or contractual terms. These potential modifications may have cost implications to the supply portfolio and will require careful consideration.

PHASE III: QUANTUM SCENARIOS & FINAL RECOMMENDATIONS

In Phase III of the RIRP analysis, the preliminary supply portfolio selections are "stress-tested" to ensure the final recommendations consider the potential impact of extreme and unlikely events or circumstances. This is a critical phase of the RIRP analysis as various "what-if" scenarios can be addressed to ensure the recommended supply portfolio will perform as anticipated and, if not, the portfolio can be modified appropriately. We have termed these various "what-ifs" as Quantum Scenarios. The quantum scenarios that were analyzed in detail included the following:

- *Changing Fundamental Market Structure* – Evaluating the market price implications of a major, yet unplanned, transmission project that further integrates the SPP-North and SPP-South regions.
- *More Stringent Environmental Policy* – Evaluating the cost impacts of more stringent regulations regarding both CO_2 and Mercury, which could influence the decision to recommend such a large component of base load, coal fired generation. Additionally, the environmental quantum scenario analysis considered the cost implications of an expanded renewable program mandate by the state of Kansas.
- *Unanticipated and Extended Supply Interruption* – Evaluating the cost impacts of the unexpected loss of a major resource in the supply portfolio whether from contract abrogation, long-term outage of major unit, supplier credit downgrade, etc.

QUANTUM SCENARIO ANALYSIS – PROJECT "X" TRANSMISSION EXPANSION

As noted in the SPP market section of the report, there is a flowgate constraint between SPP-North and SPP-South and there are well documented TLR events across this interface. Although there are no definitive plans by SPP to bolster the transmission system to enhance the flowgate, Midwest and Pace Global believe that is appropriate to consider the implications to Midwest if such a project was to be implemented and changed the fundamental structure of the regional market.

Although there are no definitive plans for bolstering the north-south flowgate in SPP, "Project X" as it has been termed, has been discussed conceptually amongst SPP members and planners. Project X would likely include the addition of the following 345 kV transmission lines:

- Spearville - Mooreland 345 kV line;
- Wichita – Mooreland 345 kV line;
- Northwest – Mooreland 345 kV line;
- Potter – Mooreland 345 kV line; and
- Pauline – Knoll - Spearville 345 kV line.

The combined Project "X" was estimated to improve transfer limits[11] between SPP-North and SPP-South as shown in Exhibit 19.

Exhibit 19: Project "X" Impacts on Transfer Capacity

Path	Base Case Rating	Expected Future Rating
SPP N- SPP S	1,200 MW	2,200 MW
SPP S – SPP N	1,200 MW	2,200 MW
MAPP- SPP N	1,200 MW	1,700 MW

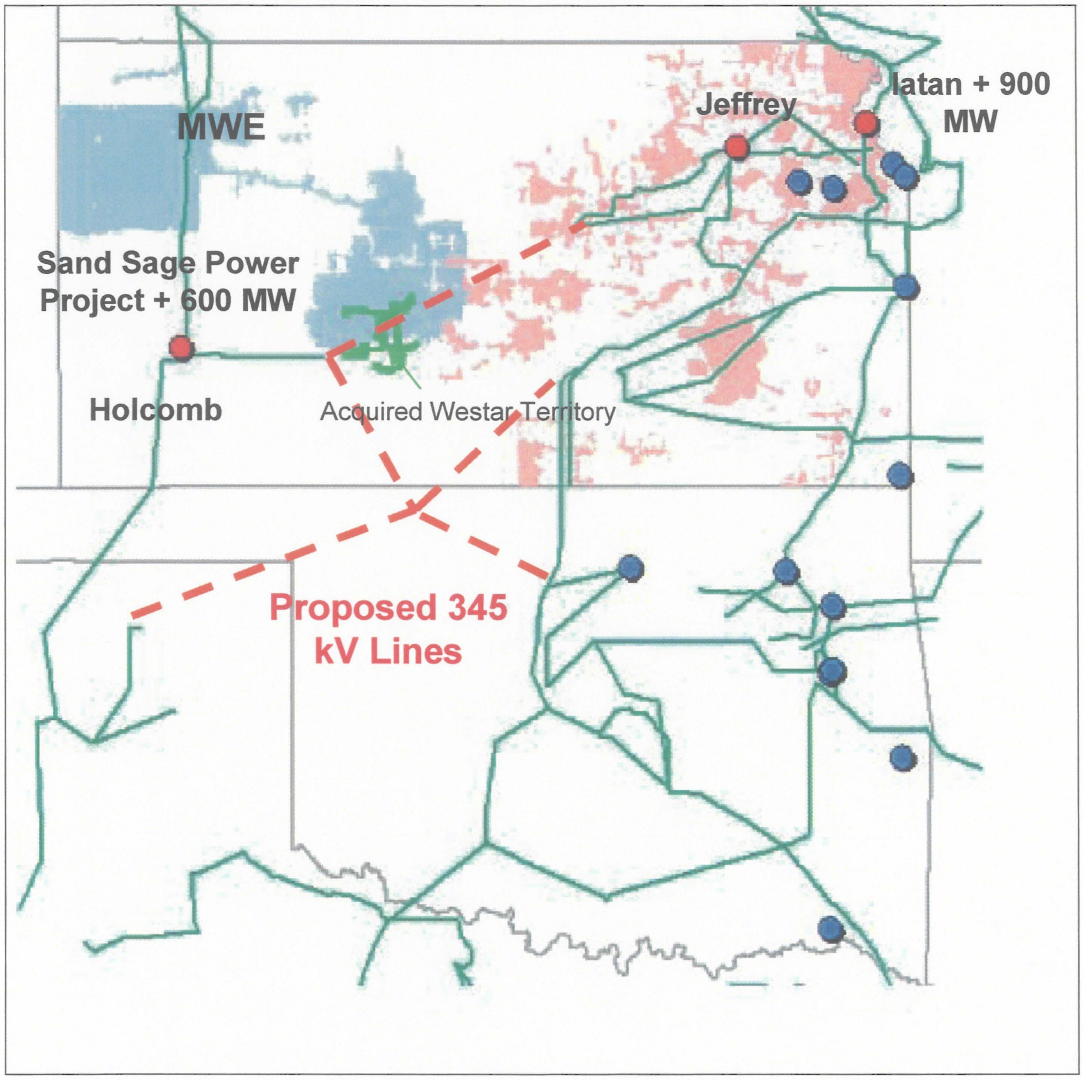
These projects include about 400 miles of new transmission lines and are estimated to cost approximately $400 million. The earliest in-service date that reasonably could be expected would be 2010. It is unlikely that a transmission project of this magnitude would go ahead without corresponding requirements of new generation. In this regard, we assumed that two new coal projects currently under consideration would go forward and be commissioned by 2010, including the following:

- Sand Sage Power Plant – 1 x 600 MW coal fired unit
- Iatan II Power Plant – 1 x 900 MW coal unit

[11] Pace estimate. Actual impacts on transfer limits would ultimately be defined by final project engineering, siting, technology selection, and regional power flows.

Project "X" and the two new coal projects are depicted in Exhibit 20.

Exhibit 20: Project "X" and New Power Plant Locations



Project "X" Impacts on Power Prices

The market price impacts of Project "X" and the new coal plants are summarized in Exhibit 21. As can be seen, impacts are relatively minor. In SPP North, market prices in 2010 decrease by a little more than 3% in the peak period, and by 3.3% in the off-peak period. In 2015, price decreases are more moderate, at less than 1% in the peak period and 1.6% in the off-peak period. The favorable price impact (from Midwest's regional perspective) is driven principally by the addition of the coal plants which displace higher cost gas plants in the dispatch queue.

Likewise, in SPP South, market prices decrease in 2010 by 2.8% in the peak period and 4.6% in the off-peak period. In 2015, price decreases are less pronounced at 1.7% in the peak period and 4.0% in the off-peak period. In this case, the greater transmission capacity provides SPP South market participants greater access to the lower cost coal capacity located in SPP North.

Exhibit 21: Market Price Impacts on Base Case

Year	% Change in Price On-Peak Period	% Change in Price Off-peak Period
SPP North		
2010	(3.1) %	(3.3) %
2015	(0.8) %	(1.6) %
SPP South		
2010	(2.8) %	(4.6) %
2015	(1.7) %	(4.0) %

In summary, although the structure of the market is changed substantially with the implementation of Project "X" and the two new coal generating units that would likely accompany the transmission expansion, the impact on market prices is relatively small and does not change our recommendation concerning Midwest's recommended supply portfolio. In fact, the recommended portfolio would likely be enhanced by Project "X" as there would be more base load coal capacity available for contract in the SPP market.

QUANTUM SCENARIO: MORE STRINGENT ENVIRONMENTAL POLICY

The assumptions with respect to environmental rules which are embedded in our base case market perspective is based on compliance with the Clean Air Interstate Rule (CAIR) and the Clean Air Mercury Rule (CAMR). These rules limit SO_2, NO_x, and mercury (Hg) emissions from power plants. The three criteria pollutants which would likely be the subject of additional regulations include Hg, CO_2 and particulate matter (PM). Of the three, the most likely would be Hg and CO_2.[12] As a result, Pace Global did not consider PM control technologies incrementally in assessing the quantum scenario operating cost adders.

Therefore, this environmental policy quantum scenario was developed to analyze the impact of a more stringent environmental policy for both mercury and CO_2 removal in addition to the requirements for CAIR and CAMR. It is reasonable to believe that any more stringent national regulations beyond the CAIR and CAMR will not be implemented prior to 2015 given Congress' inability to pass the Clear Skies and the higher than expected mercury cap for 2010 under CAMR. The quantum scenario assumes there would be a simultaneous requirement to achieve 90% removal for Hg and a 7% reduction in CO_2 via cap and trade programs starting in 2015.

[12] Hg control will likely require the use of fabric filter bag houses for capture of Hg-laden particles. Control for fine particulate matter - particles smaller than 2.5 microns (PM 2.5) - also requires use of fabric filter bag houses. Therefore, similar to Hg co-benefits from SO_2 and NO_x control, Hg control will provide PM control co-benefits.

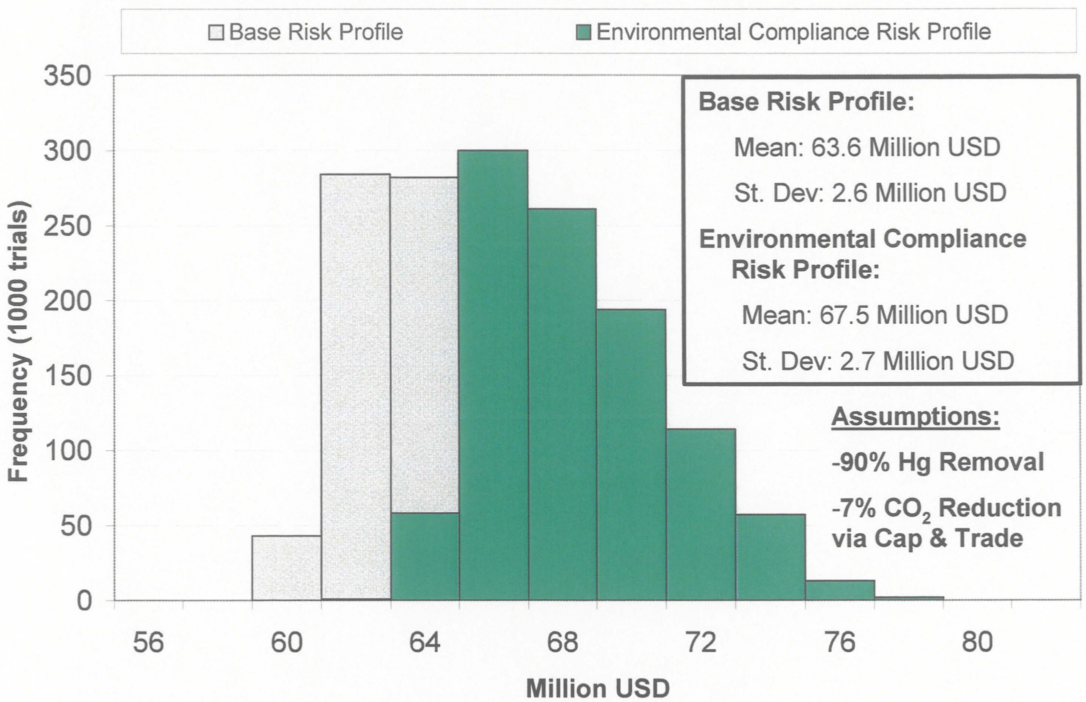
Pace Global base case assumption is that Hg removal for the typical generating facility will be at approximately the 50% level. Several of the proposed Federal regulations listed above, as well as some of the current individual state regulations, require Hg control in the range of 80% to 90%. To assess the potential impact of additional Hg controls on generating costs, Pace Global calculated the cost of Hg control at the 50% level and the 90% level for a typical coal based generating station. The incremental cost to capture the additional 40% of Hg was estimated at $27,000/lb Hg, or equivalent to ~$2.20/MWh.

Future CO_2 reductions at existing generating stations will be controlled primarily through the purchase of CO_2 credits from other plant shutdowns, sequestration projects, or land-use projects. CO_2 capture has not proved to be economical at generating stations because the flue gas streams are large volumes with dilute CO_2 content, making sequestration exceedingly difficult. In the European Union, where Kyoto Protocol-mandated CO_2 control is occurring, many sites are purchasing CO_2 credits in the rapidly developing credit market. EU CO_2 credits have recently been traded in $12 to $17/ton range. In the US, the nascent CO_2 credit trading has typically traded at approximately $1 to $2/ton. Pace Global assessed the cost of CO_2 reductions for a typical coal fired generating station. To assess these costs for purposes of the Quantum Scenario analysis, Pace Global assumed a required 7% reduction in CO_2 emissions, and that CO_2 credit costs would be $10/ton. For a typical station operating at a 75% on-stream factor, the cost of CO_2 control would be $0.60/MWh.

The impact of the Quantum Scenario incremental environmental requirements would be $2.20/MWh for Hg control and $0.60/MWh for CO_2 control. This results in a total impact of $2.80/MWh for potentially more stringent incremental environmental control beyond CAIR and CAMR. As previously mentioned, these additional operating costs would occur no earlier than 2015. Both the market price implications and assumed cost pass through terms of existing supply contracts were considered when calculating the cost impact of this quantum scenario on Midwest.

The impact of this Quantum Scenario on cost expectations and cost variability are reflected in the modified risk profile depicted in Exhibit 22.

Exhibit 22: Stringent Environmental Policy Quantum Scenario if Implemented in 2015

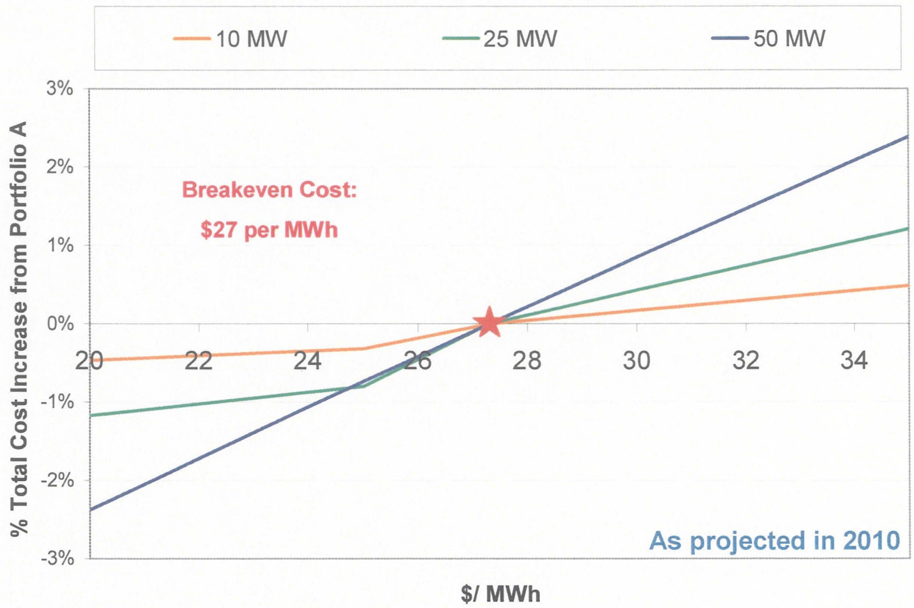


The increased environmental compliance costs clearly shifts the expected portfolio costs higher as indicated by the green distribution above but does not alter the ultimate cost distribution of the supply portfolio. Furthermore, the expected cost change is relatively modest vs. the alternative of increasing Midwest's exposure to natural gas fired generation by displacing the recommended coal fired base load generation. Therefore, the recommended supply portfolio that includes ~165 MW of base load coal capacity remains valid even under a more stringent environmental policy targeted to reduce coal plant emissions specifically.

QUANTUM SCENARIO: IMPACT OF AN EXPANDED RENEWABLE ENERGY MANDATE

An additional environmental quantum scenario was developed to consider the cost implications of an expanded renewable program mandate by the state of Kansas, i.e. wind generation portfolio standards. Wind capacity was evaluated for different amounts of wind generation. Three quantities of wind generation were considered 10 MW, 25 MW and 50 MW. The analysis was performed by obtaining a generation profile by month from the Grey Wind project which is currently contracted with Midwest. This generation profile was added to the recommended supply portfolio incrementally and analyzed to determine the impact of various volumes of wind generation at various contract prices. Wind generation power purchase agreements are typically structured as must take contracts at a specific price. The results of the quantum scenario analysis are presented in Exhibit 23.

Exhibit 23: Impact of Wind Generation on Midwest's Electricity Supply Costs



Note: 3193 MWh per MW of Wind
10 MW = 2% of MWE's Annual Energy

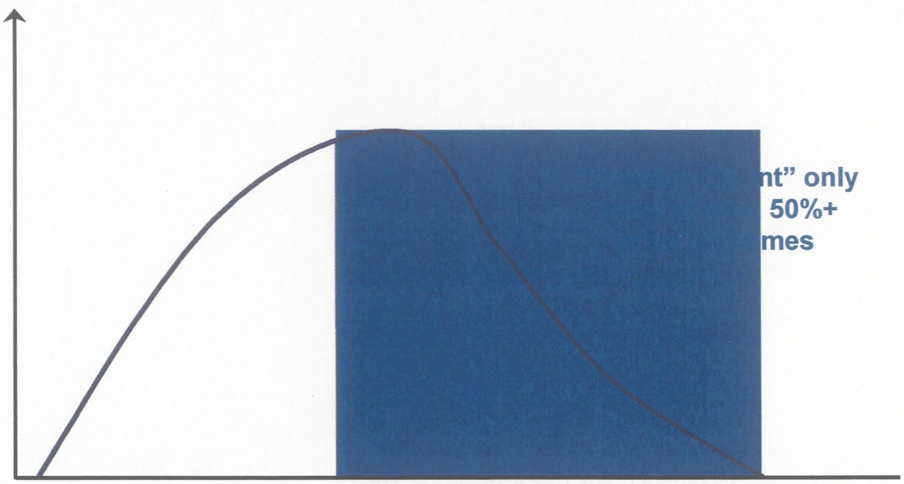
The analysis indicates that at prices of approximately $27 per MWh there is negligible impact to Midwest's supply costs. This price may not support the investment requirements of wind project developers. Therefore, the analysis provides insights to Midwest in terms of a target price for wind power purchase negotiations and allows Midwest to consider what volume of wind generation they might consider in their portfolio in light of its potential to increase costs to its members.

QUANTUM SCENARIO: IMPORTANCE OF SUPPLY DIVERSITY

There are a variety of events that could cause an unanticipated and extended supply interruption for Midwest. This final quantum scenario considers these potential occurrences and their impact on Midwest's supply costs. Extended supply interruption could come in the form of a long-term and unanticipated outage of a major generating unit that Midwest relies on, supplier bankruptcy, or contract abrogation. All of these events may be relatively low probability events but they have the potential of increasing the risk profile of Midwest, increasing costs to the members, and will lead to increased reliance on short-term and more volatile electricity pricing to make-up the shortfall.

The quantum scenario analysis considers the potential impact on Midwest expected portfolio supply costs in the event varying degrees of contract capacity are suddenly absent from Midwest's supply portfolio for one year without the ability to manage the exposure. In addition, the quantum scenario assumes that the supply resource(s) is absent at a time of relatively high electricity prices. This scenario was constructed by only sampling from the 50 – 99 percentile SPP electricity price distribution in determining the portfolio supply cost impact as depicted conceptually in Exhibit 24.

Exhibit 24: Distribution of Market Prices



The base case for 2010 was used as the test year in which this quantum event occurred. We evaluated three different cases, as follows:

- 50 MW coal contract is unavailable (e.g. abrogated), while remaining 115 MW of coal capacity remains in the supply portfolio.
  - This case is a proxy for a portfolio of three contracts each with approximately 50 MW of capacity, two remain performing and one unavailable.
- 100 MW coal contract is unavailable, while remaining 65 MW of coal capacity remains in the supply portfolio.
  - This case is a proxy for a portfolio of approximately two contracts one with 100 MW of capacity and the other with 65 MW.
- 150 MW coal contract is unavailable, while 15 MW of base load coal capacity is all that performs in the portfolio.
  - This case is a proxy for a non-diversified portfolio that is dominated by a single supplier.

A summary of the quantum scenario results is shown in Exhibit 25.

Exhibit 25: Summary Results Portfolio Diversification Analysis

		Cost Increase Due to Abrogation of Single Coal Contract Supplying Indicated Load (Million USD)		
	Base Cost	50 MW	100 MW	150 MW
Mean	50.2	4.2	6.3	8.6
Standard Deviation	1.5	0.2	0.5	0.8
SPP Price Level				
50%	50.1	4.1	6.4	8.6
75%	51.1	4.3	6.6	9.1
95%	53.0	4.5	7.0	9.8
99%	54.1	4.8	7.8	10.8
		↑ 1 contract abrogated / 115 MW still performing	↑ 1 contract abrogated / 65 MW still performing	↑ 1 contract abrogated / 15 MW still performing

The risk of relying on a single supplier is significant and could place Midwest's members at risk of incurring $8.6 to $10.8 million per year in increased supply costs which represents a cost increase of 17% to 22%. By diversifying its supply base the exposure is significantly reduced as noted by the relative exposure for the 50 MW case. The quantum analysis also indicates that Midwest's cost variance would be much greater in the event of a loss of a 150 MW of coal capacity as the standard deviation of the portfolio cost goes from $1.5M to $2.3M. This indicates that Midwest's supply costs would be much more volatile which is at odds with Midwest's rate stability business objective. Based on this analysis, Midwest should target three or more suppliers and/or generators for the base load portion of its supply portfolio to reduce the risks associated with supply concentration subject to the commercial availability of such alternatives.

QUANTUM SCENARIO CONCLUSIONS

Based on the analysis and conclusions drawn from the RIRP Phase III Quantum Analysis, the Phase II recommendation of Midwest's supply portfolio remains valid. When considering the impacts of changing market structure as developed for Project "X" or a more stringent environmental air pollutant policy, the recommended portfolio would be expected to continue to achieve Midwest's business objectives. As Midwest begins to solicit proposals and implement its future supply portfolio, three or more suppliers should be targeted for the base load needs to gain the benefits of supply portfolio diversification.

CONCLUSIONS AND RECOMMENDATIONS

The optimal portfolio for Midwest consists of contracts from sources consisting of approximately 165 MW of coal, 25 MW of intermediate combined cycle gas turbine, and the balance of the capacity needs provided via peaking capacity. It important to note that this portfolio is generally consistent with the current resource mix that Midwest has under contract suggesting that Midwest has been diligent in its planning efforts heretofore. The results of the analysis indicates the make-up of the recommended portfolio is expected to remain stable over the long-term planning horizon assuming customer load growth and energy usage patterns remain relatively consistent.

The recommended supply portfolio when compared against the myriad of alternatives, best meets Midwest's needs and should be a solid foundation for achieving its business objectives over the long-term planning horizon. As Midwest moves forward with implementing its supply portfolio utilizing 3 or more suppliers should be targeted for base load supply to gain the benefits of portfolio diversification. The implementation of the entire supply portfolio is of course subject to commercial availability, the contractual arrangements that can ultimately be agreed upon and the ability of regional transmission infrastructure to support the delivery of capacity and energy to Midwest's service territory.

APPENDIX A: PEAK LOAD AND ENERGY FORECASTS

Appendix A is attached as a separate file.

APPENDIX B: ASSUMPTIONS DOCUMENTATION FOR SOUTHWEST POWER POOL (SPP)

Appendix B is attached as a separate file.

APPENDIX C: MIDWEST ENERGY DSM PROGRAM OPPORTUNITY REVIEW

Appendix C is attached as a separate file.