Paddock-Rockdale Stakeholder Meetings
Results Presentation
September 25 and October 19, 2006
Q&A

Q: Isn't a portion of the preferred route currently constructed double circuit?
A: Yes about 6 miles.

Q: What is the location of the Portage Trienda line?
A: West of Portage.

Q: What about the alternate route?
A: Currently the alternate route has some 138, 69kV - some double circuit, some new right of way.

Q: What is the cost of the alternate route?
A: Around $30M more than the preferred alternative.

Correction: Slide 8, 2016, New West Middleton-North Madison 345 kV line

Q: What date was assumed for installation of the LaCrosse Columbia 345 kV line?
A: Later than 2011. It was included in one of ATC's futures (Robust Economy) in the 2016 model.

Q: Why did you use a carbon tax of $44 per ton?
A: When ATC started the future definition process, we had available to us some very early descriptions MISO was proposing to use in their futures definitions. Within their High Environmental scenario, they had a $44/ton CO2 tax. We adopted this as the starting point for one of our futures and had an independent expert from The Brattle Group verify the $44/ton. The independent expert stated that this was within the realm of plausibility for a CO2 tax although it was at the high end. We also reviewed the futures descriptions with numerous stakeholders who were reasonably comfortable with the $44/ton number.

Q: Slide 12, please clarify the futures "with" and "without"?
A: The North LaCrosse to Columbia line that is proposed by the CapX 2020 group as part of their Phase III projects. The line is not included in the 2011 runs for either future but is included in the 2016 run of the "Robust Economy With" future.

Q: NPV calculation is slightly different to establish project cost than what MISO uses. MISO uses the RECB II annual number.

A: RECB II does call for an annual number in describing how the Adjusted Production Cost and the Load-weighted LMP would be weighted (70%/30% metric.). To determine the Net Present Value, ATC used the annual 70%APC and 30%LLMP numbers in 2011 and 2016 to estimate the annual savings for each year of the life of the project. These benefits were netted against the costs to determine the Net Present Value. This is why we describe the Net Present Value of that metric to be the RECB II metric.

Q: NPV is calculated through 2053? Or 2050? The three additional years could make a difference.

A: The original NPVs were calculated through 2053 to reflect the fact that, if ATC installs the line earlier, ratepayers will have more years of savings than if they install the line later. Additional NPVs are shown in the table below that reflect 40 years of savings in each case. As can be seen, the results change very slightly.

	Robust Economy - No LaCrosse to Columbia	Robust Economy with LaCrosse to Columbia	High Retirements	High Environmental	Slow Growth	Fuel Supply Disruption	High Growth Wisconsin
2010 In-Service Date ($ Millions)							
Adjusted Production Cost	$118	$72	$652	($53)	($123)	$710	$245
70% APC + 30% Load LMP	$349	$250	$1,049	$26	($106)	$1,141	$596
Load LMP	$887	$665	$1,976	$210	($67)	$2,144	$1,416
2011 In-Service Date ($ Millions)							
Adjusted Production Cost	$111	$65	$650	($53)	($121)	$667	$241
70% APC + 30% Load LMP	$340	$241	$1,049	$24	($104)	$1,074	$593
Load LMP	$874	$650	$1,980	$203	($66)	$2,024	$1,412
2013 In-Service Date ($ Millions)							
Adjusted Production Cost	$91	$45	$623	($61)	($124)	$581	$222
70% APC + 30% Load LMP	$311	$213	$1,015	$11	($108)	$946	$564
Load LMP	$825	$604	$1,930	$178	($72)	$1,798	$1,363

Q: What is the cross over point for the project? A late cross over point where the project costs are not recovered for 50 years is not as desirable as a project with an earlier payback.

A: The breakeven years and crossover points vary based on the future, metric and in-service date chosen. Below are two tables – one showing the breakeven years for each of the scenarios, metrics and in-service dates and one showing the crossover years.

Summary of Paddock-Rockdale Futures Analysis - Breakeven Year
(First Year of Annual Savings - $ Millions)

	Robust Economy - No LaCrosse to Columbia	Robust Economy with LaCrosse to Columbia	High Retirements	High Environmental	Slow Growth	Fuel Supply Disruption	High Growth Wisconsin
	2010 In-Service Date ($ Millions)						
Adjusted Production Cost	2012	2012	2012	2025	2051	2010	2012
70% APC + 30% Load LMP	2011	2011	2011	2016	2044	2010	2011
Load LMP	2010	2010	2011	2011	2028	2010	2011
	2011 In-Service Date ($ Millions)						
Adjusted Production Cost	2012	2013	2012	2026	2052	2011	2012
70% APC + 30% Load LMP	2012	2012	2012	2017	2046	2011	2012
Load LMP	2011	2011	2012	2012	2029	2011	2012
	2013 In-Service Date ($ Millions)						
Adjusted Production Cost	2014	2017	2013	2030	N/A	2013	2014
70% APC + 30% Load LMP	2014	2014	2013	2020	2049	2013	2013
Load LMP	2013	2013	2013	2014	2033	2013	2013

Summary of Paddock-Rockdale Futures Analysis - CrossOver Years
(First Year of Cumulative Savings - $Millions)

	Robust Economy - No LaCrosse to Columbia	Robust Economy with LaCrosse to Columbia	High Retirements	High Environmental	Slow Growth	Fuel Supply Disruption	High Growth Wisconsin
	2010 In-Service Date ($ Millions)						
Adjusted Production Cost	2018	2021	2013	N/A	N/A	2011	2015
70% APC + 30% Load LMP	2013	2014	2013	2034	N/A	2010	2013
Load LMP	2012	2012	2012	2015	N/A	2010	2012
	2011 In-Service Date ($ Millions)						
Adjusted Production Cost	2019	2023	2013	N/A	N/A	2012	2016
70% APC + 30% Load LMP	2014	2014	2013	2035	N/A	2011	2013
Load LMP	2012	2012	2012	2015	N/A	2011	2012
	2013 In-Service Date ($ Millions)						
Adjusted Production Cost	2022	2030	2014	N/A	N/A	2014	2017
70% APC + 30% Load LMP	2015	2016	2014	2044	N/A	2013	2014
Load LMP	2014	2014	2013	2017	N/A	2013	2014

Q: It is good to have a range of possible scenarios but is there a base case?
A: There is a base case but the scenarios are a better indicator of the possible outcomes since we cannot accurately predict the future. No one scenario will last for 40 years. The future will actually be a summary of the impact of the line in the different scenarios we have specified and others that will occur over the life of the project. We anticipate that the vast majority of these scenarios will fall within the bounds of ATC's specified futures.

Q: In the Slow Growth scenarios the NPV is actually negative?
A: Yes. There are savings in this scenario but not enough to pay the cost of constructing the line.

Q: Symbols seem tightly grouped on slide 12 by type for all but the Fuel Supply Disruption. Why?
A: The annual savings in 2011 in the Fuel Supply Disruption (FSD) future is over $200 million compared to approximately $3-$35 million in the other futures. Because the 2011 savings are so much higher for FSD future, the later installation dates have a much higher impact and create greater dispersion around installation dates than in the other futures.

Q: How slow is slow growth?
A: Slow Growth is 0.5% annual demand and energy growth both inside and outside Wisconsin. High growth is 3% annual growth.

Q: Are the estimates of congestion costs future values or present?
A: 2011 and 2016 estimated values are used. For determining net present value, the savings are inflated over the life of the project and discounted back.

Q: Slide 16: What was the estimate used for losses?
A: Capacity loss reductions total approximately 7MW in 2011 and approximately 22 MW in 2016 and those MWs were valued at the cost of a simple cycle CT. Energy losses assumed were approximately 4.3% of the forecasted load.

Q: Is this similar to marginal loss charges from MISO?
A: Marginal loss charges are calculated from the Marginal Loss Charge portion of the LMP. We have adjusted for the fact that marginal loss charges are approximately 2x the average losses and that MISO has a refund mechanism to return some portion of the marginal losses to load-serving entities.

Q: Surprised on lower numbers on competitiveness. No future call/benefit from restructuring?
A: The competitiveness numbers that were presented assumed that Wisconsin would remain a cost-of-service state with lower levels of load being served at market prices. If higher levels of load were served at market prices, the impact of the competitiveness benefits would be much higher.

Q: What is the sensitivity of the project cost? What if the project cost is greater or less than the estimated cost? Can there be a break even chart? How high could the cost go and still have a break even cost?
A: The sensitivity of the NPV analysis to changes in project cost is roughly dollar for dollar. So an increase in project cost of $10M would decrease the resulting NPV results by roughly $10M, and a decrease in project costs of $10M would increase the resulting NPV by roughly $10M. The exact changes in NPV will depend on the type and timing of the changes in project costs.

Q: What is the expected construction time?
A: 42 weeks

Observation: Congestion costs should not be considered as capital costs but it is good to include them in the overall costs.

Q: The original cost estimate of the project was $67M. Why the increase?
A: Inflation in the cost of transmission materials and labor from 2005. Current inflation for transmission materials and labor 5%. We also have better cost estimate information due to experience including environmental impact fees, congestion cost, and substation costs.

Q: How does the increase in Paddock Rockdale costs compare to the other Access alternatives?
A: The other access project alternatives, which were reviewed last year, also increased in price in a similar manner to Paddock-Rockdale.

Q: How much will be spent on public relations? You may see some opposition.
A: The estimate for licensing the project is $3.7M. That cost includes the development of the justification and the CPCN information as well as local and customer relations.

Q: How will the stakeholders be notified of the ATC Board decision?
A: ATC's Board of Directors has authorized the Paddock-Rockdale project to move forward.

Q: At what point would the project be sent to MISO for cost sharing analysis?
A: MISO has seen the basics of the results and the analytical process. The analysis approach aligns very well with MISO's approach. The project will be sent to MISO for analysis when the rules for economic cost-sharing become clearer.

Q: Could Wisconsin be penalized for moving ahead with Paddock Rockdale? Reduced opportunity for cost sharing? Would review be done before construction? in-service?
A: ATC will continue to work with MISO to evaluate the Paddock-Rockdale project for project approval (either inclusion in the MTEP '06 or out-of-cycle review) and for possible cost-sharing through RECB II if the project meets the ultimate rules that are adopted. MISO has included the Paddock-Rockdale project in Appendix B of MTEP '06.

Q: Can PR2 be coupled with LaCrosse Columbia because of the reduction in stranded generation achieved by the combination of projects and would the result be seen as better for the cost sharing review?
A: Regional cost sharing may be possible. The cost sharing process is not yet fully defined, but a combination of PR2 plus LaCrosse to Columbia might increase the likelihood that the projects could clear cost recovery hurdles and allow for greater regional cost sharing. However, each project needs to be justified on its own merits. In addition, the PR2 is needed in 2010 and LaCrosse to Columbia is currently a Phase III CapX project with an in-service date much further out in time.

Q: Can PROMOD generate marginal congestion and marginal losses?
A: Yes.

Q: How will ATC define and identify economic and reliability projects in the future?
A: ATC does not believe that there is a dichotomy between economic and reliability projects. All transmission projects have aspects of both reliability and economics. ATC has developed this methodology to evaluate the economic benefits of transmission projects and will be incorporating it into the overall project prioritization process.

Q: How much regular coal is added in each future versus IGCC?

Coal Generation Portfolios Outside ATC - Steam Turbine vs IGCC				
Scenario	2011 Steam Turbine MW Additions	2011 IGCC MW Additions	2016 Steam Turbine MW Additions	2016 IGCC MW Additions
Reference Case	5,379	600	10,029	3,744
Robust Economy Case	5,979	4,744	17,029	6,494
High Retirements Case	5,379	600	10,029	3,744
High Environmental Case	1,100	0	600	1,897
Slow Growth Case	0	0	0	0
Fuel Supply Disruption Case	4,109	600	8,229	2,700
High Growth Wisconsin Case	1,850	600	5,379	1,100

Q: Did ATC assume any CO2 sequestration in any of its futures?
A: No

Q: Please provide a list of plants modeled to be retired.

ATC made different assumptions about which plants would be retired in each future depending on the circumstances in that future.

Existing Generation Retirements within ATC for the Various Analyses for 2011

Unit Name	Maximum Capacity (MW)	Robust Economy	High Retirements	High Environmental	Slow Growth	Fuel Supply Disruption	High Growth Wisconsin
Blount:4	23.8		X	X	X		X
Blount:5[1]	30.3		X	X	X		X
Blount:3[1]	41.7		X	X	X		X
Presque Isle:1	25.0		X	X	X		X
Presque Isle:2	37.0		X	X	X		X
Presque Isle:3	58.0		X	X			
Pulliam:3	28.2		X				
Presque Isle:4	58.0		X				
Total Retirements (MW)	**302**	**0**	**302**	**216**	**158**	**0**	**158**

[1]*Blount Units 3,5,6 and 7 were coal fired steam turbine units in the database obtained from MISO, but were modified to be natural gas fired steam turbine units based on newer information.*

Existing Generation Retirements within ATC for the Various Analyses for 2016

Unit Name	Maximum Capacity (MW)	Robust Economy	High Retirements	High Environmental	Slow Growth	Fuel Supply Disruption	High Growth Wisconsin
Blount:4	23.8		X	X	X		X
Blount:5[1]	30.3		X	X	X		X
Blount:3[1]	41.7		X	X	X		X
Presque Isle:1	25.0		X	X	X		X
Presque Isle:2	37.0		X	X	X		X
Presque Isle:3	58.0		X	X	X		X
Pulliam:3	28.2		X	X	X		X
Presque Isle:4	58.0		X	X	X		X
Pulliam:4	31.0		X	X	X		X
Pulliam:5	50.2		X	X	X		X
Manitowoc:5	22.0		X	X	X		X
Blount:6[1]	53.0		X	X	X		X
Escanaba:STCL2	26.3		X	X	X		X
Main Street Plant:STCL2	45.0		X	X			
Shiras:2[2]	21.0		X	X			
Shiras:3[2]	43.7		X	X			
Milwaukee County:1	12.0		X	X			
Pulliam:6	65.0		X	X			
Weston (WPS):1	68.1		X	X			
Edgewater (WPL):3	74.0		X	X			
Presque Isle:5	87.0		X	X			
Pulliam:7	82.0		X	X			
Kewaunee Nuclear Plant	578.0		X				
Total Retirements (MW)	**1,560**	**0**	**1,560**	**982**	**484**	**0**	**484**

[1]Blount Units 3,5,6 and 7 were coal fired steam turbine units in the database obtained from MISO, but were modified to be natural gas fired steam turbine units based on newer information.

[2]Shiras 2 and 3 are owned by the City of Marquette, which is surrounded by ATC, but technically not part of ATC. These units fall into a gray area because they are quite important to the Upper Peninsula of Michigan.

Q: Is Kewaunee assumed to be producing energy throughout the planning period for Wisconsin?
A: Yes, in all futures except the High Retirements future in 2016.

Q: Why is the Resource Cost Advantage additional benefit negative for the Robust Economy future?
A: The Resource Cost Advantage benefit is predicated on building a power plant closer to the fuel source (in this case, a mine mouth coal plant in central Illinois) and "transporting coal via wire rather than via rail." In the Robust Economy future, the high growth both inside and outside the ATC footprint creates transmission constraints in Illinois which make it more expensive to import power from a mine-mouth plant in central Illinois than to generate it from a plant in Wisconsin.