December 28, 2001

Honorable Linwood A. Watson, Jr.
Acting Secretary
Federal Energy Regulatory Commission
888 First Street, N.E. Room 1A
Washington, D.C. 20426

Re: Report on the 2001-2002 PJM Customer Load Reduction Pilot Program

Dear Mr. Watson:

In accordance with the Commission's directive in PJM Interconnection, L.L.C., 95 FERC ¶ 61,306 (2001), PJM Interconnection, L.L.C. ("PJM") hereby submits the attached report assessing the effectiveness of the 2001-2002 PJM Customer Load Reduction Pilot Program ("Pilot Program") accepted by the Commission in Docket No. ER01-1671-000.

This report has been served on all PJM members and will be posted on PJM's website.

If you have any questions regarding this matter, please do not hesitate to contact the undersigned.

Sincerely yours,

Carrie L. Bumgarner
Counsel for
PJM Interconnection, L.L.C.

cc: All PJM members

Attachment

Report on the
2001-2002 PJM Customer Load Reduction Pilot Program

In accordance with the Commission's directive in PJM Interconnection, L.L.C., 95 FERC ¶ 61,306 (2001), PJM Interconnection, L.L.C. ("PJM") submits this report assessing the effectiveness of the 2001-2002 PJM Customer Load Reduction Pilot Program ("Pilot Program") accepted by the Commission in Docket No. ER01-1671-000.[1]

Background

During the summer of 2000, PJM implemented a Customer Load Response Pilot Program ("2000 Pilot Program") designed to encourage the development of demand-side response during emergency situations by compensating end use customers for measurable load reductions made at the request of PJM. The 2000 Pilot Program responded to the Federal Energy Regulatory Commission's ("FERC") Notice of Interim Procedures To Support Industry Reliability Efforts and Request For Comments, 91 FERC ¶ 61,189 (2000), and was in furtherance of the FERC's efforts to take advantage of distributed resources and stimulate demand side market responses during peak load conditions in the summer. The FERC approved the 2000 Pilot Program on August 7, 2000, and it was in effect from July 8, 2000 until September 30, 2000. However, PJM did not experience any such high demand conditions during the summer of 2000, and participants were never requested to reduce load.

In its July 26, 2000 order accepting the 2000 Pilot Program, (PJM Interconnection, L.L.C., 92 FERC ¶ 61,059 (2000)), FERC directed "the parties to discuss how best to address potential capacity shortfalls next summer and to make appropriate filings prior to next summer." Id. at 61,152. In response to this directive, PJM and its stakeholders developed the 2001-2002 Load Response Program.

Development and Implementation Process of 2001-2002 Load Response Pilot Program

To develop the 2001-2002 Pilot Program, the PJM Distributed Generation User Group ("DGUG") deliberated from December 2000 through March 2001, meeting about once per month. During this time, the DGUG asked for and received stakeholder input and feedback. A primary objective of the DGUG was to expand the 2000 Pilot Program to provide payment for discretionary reductions in energy use in response to high prices, in addition to payments for reductions during emergency conditions.

[1] This report was prepared by the PJM Market Monitoring Unit under its authority to monitor PJM Market operating rules, standards, procedures and practices. See PJM Open Access Transmission Tariff Attachment M, Art. III.

The DGUG developed a revised 2001-2002 Pilot Program that contained both an emergency and an economic option. The emergency option was the same as the 2000 Pilot Program with the exception that customers participating in the PJM Active Load Management program ("ALM") also were allowed to participate in the Pilot Program when such participation did not impact the fulfillment of their ALM commitment. The economic option was designed to provide a mechanism by which any qualified market participant may be compensated when it contracts with end-use customers to voluntarily reduce load during times of high prices. Prior to implementation of the 2001-2002 Pilot Program, only the Load Serving Entity ("LSE") serving the end-use customer was in a position to receive the savings associated with load reductions by that customer and to share the savings with that customer. The 2001-2002 Pilot Program was designed to facilitate the development of a market that can be served by other intermediaries.

The proposed 2001-2002 Pilot Program reflects the majority view on a number of issues on which consensus could not be reached. A table of these issues, including the majority and minority opinions of the DGUG members, is contained in Attachment A to this report.

The DGUG submitted its proposed Pilot Program to the PJM Energy Market Committee ("EMC"). The emergency option of the 2001-2002 Pilot Program was endorsed by the PJM EMC by a vote of 24-10 and approved by the PJM Members Committee ("MC") by a weighted vote of 3.15-.85. The economic option of the program was approved by the EMC by a vote of 23-13, but failed to win MC approval with a weighted vote of 1.98-2.02.

The PJM Board of Managers decided to file the emergency option and the economic option with the FERC based on its determination that both components of the 2001-2002 Pilot Program are important to enhancing the reliability and efficiency of the PJM system. By order dated May 30, 2001, the FERC accepted both options of the program, effective June 1, 2001, and required PJM to make a compliance filing to reflect certain changes. (PJM Interconnection, L.L.C., 95 FERC ¶ 61,306 (2001)) The FERC also required PJM to submit a report assessing the effectiveness of the 2001-2002 Pilot Program.

Description of 2001-2002 Pilot Program

Participant Qualifications

Two types of distributed resources are candidates to participate in the 2001-2002 Pilot Program (both in the emergency option and in the economic option): (1) participants that have the ability to supply required load reductions via local generators that can serve their load and that are either not synchronized to the grid or have no net export to the grid; and (2) participants that have the ability to reduce measurable and verifiable portions of load, without onsite generation.

To participate in the emergency option, a distributed generation resource also must (1) be capable of reducing at least 100 kW of load; (2) have the ability to participate for a total of at least 10 hours over the 2001-2002 Pilot Program operating period ending May 31, 2002; (3) be available any hours between 0900 and 2200 on any or all days of the week;

(4) be capable of achieving full reduction within one hour of PJM's request to reduce load; and (5) be capable of receiving PJM notification.

Metering Requirements
Participants in the 2001-2002 Pilot Program must have metering equipment that provides integrated hourly kWh values that either meet the Electric Distribution Company ("EDC") requirements for accuracy or have a maximum error of two percent end-to-end (including PTs and CTs).

Load Response Option 1: Emergency Option
The emergency option of the 2001-2002 Pilot Program is essentially the same as that approved under the 2000 Pilot Program.

Implementation
PJM initiates the request for load reduction following the declaration of a Maximum Emergency Generation event as described in the PJM Operating Agreement and prior to implementation of ALM Steps 1 and 2.[2] Maximum Emergency Generation is used to increase the PJM control area generation above the maximum economic level and is implemented whenever generation is needed that is greater than that available from economic offers to PJM.

Measurement
The measurement requirements for the emergency option of the 2001-2002 Pilot Program were the same as under the 2000 Pilot. Customers measure their actual integrated hourly load for the hour prior to the event and for each hour during the event and then calculate the reduction for each hour as the difference between the two values.

Payment
Participants in the 2001-2002 Pilot Program are reimbursed for reducing load based on the actual kWh relief provided, adjusted for losses. PJM pays the higher of the appropriate zonal Locational Marginal Price ("LMP") or $500/MWh to the PJM member that nominates the load reduction. The PJM member is assessed a $10 transaction fee per account for each event.[3] In the event a participant is also an ALM customer and ALM is called for concurrently with the Pilot Program, then payments pursuant to the program are made to the participant only for load response during the time ALM obligations are not in effect. In addition, any load response in excess of the contracted ALM amount is compensated under the 2001-2002 Pilot Program for the entire duration of the response.

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[2] See California Independent System Operator Corp., 91 FERC ¶ 61,256, at 61,895, 61,896. Similar to the program in California, load reductions under the Pilot Program may be implemented prior to any ALM program.

[3] This is a $15 reduction from the transaction fee charged under the 2000 Pilot Program.

Allocation of Payments

All payments under the 2001-2002 Pilot Program are collected from purchasers of energy, in proportion to their net purchases from the PJM energy market during the hour. Charges and credits related to the 2001-2002 Pilot Program appear on the PJM members' monthly bills. This allocation method tracks the existing method for allocating costs relating to emergency conditions established under the PJM Operating Agreement.

Load Response Option 2: Economic Option

The economic option of the 2001-2002 Pilot Program is based on economic rather than emergency conditions.

Participant Qualifications

The qualifications for participation in the economic option are the same as for the emergency option, except that the special membership provisions do not apply. Participants in the economic option must be full members of PJM with all of the attendant responsibilities and obligations.

Measurement

The measurement requirements for the economic option include two methods for measuring load reductions. Under the first method, an end-use customer is required to continuously meter a specific process that could be shown to have been shut down in response to the program. The second method permits participants to negotiate other methods to accurately represent a customer's normal load profile during an event. No participants in the program submitted metering of a specific process that was shut down to accomplish a reduction. All participants in the economic option negotiated with both PJM and their EDC to establish a method of calculating a baseline load level and then used this baseline load to measure reductions for which they were compensated. Each of these methods involved calculating the average hourly load for the customer for between five and ten comparable days prior to the reduction day. Each of the methods provided reasonable estimates of non-reduction load levels on the reduction days, but more work remains in order to establish a common approach to calculating the baseline load level.

Registration

The registration requirements are the same for the economic option as for the emergency option. However, LSEs arranging load reduction agreements with customers for which they are energy suppliers are not required to register separately to participate in the economic option of the 2001-2002 Pilot Program. Only those PJM members arranging for load reductions with customers for which another PJM member is the LSE are required to register. This registration flexibility is designed to encourage broad participation in economic load reductions by any of an LSE's curtailable loads.

Implementation/Operations

Unlike the emergency option, the economic option of the 2001-2002 Pilot Program is not based on the declaration of a Maximum Emergency Generation in PJM, but rather on the economic decisions of the PJM market participants. In other words, participants in the

program determine the conditions under which they will reduce load. PJM anticipates that the principal indicator of conditions that warrant economic load reductions are the locational marginal prices of energy faced by the participants.

To keep PJM informed of the amount of load expected to be reduced at various price levels (to maintain adequate system control), program participants are responsible for maintaining the load reduction information associated with each participating customer, including the amount and price at which the load will be reduced. Participants also are required to email such information to PJM immediately prior to, or concurrent with, accomplishing the load reduction.

Payment

For LSEs that register pursuant to the registration provisions of the 2001-2002 Pilot Program, PJM indicates the value of the load reduction on the LSE's bill in the following manner.[4] If the load reduction is arranged by a third party Curtailment Service Provider (CSP), or the end use customer itself, PJM bills the LSE serving the energy needs of the customer the appropriate LMP for the entire amount of energy necessary to meet the customer's load without the reduction. PJM then refunds that LSE an amount equal to the retail generation and transmission charge that the LSE would have received from the retail customer had the load not been reduced. The difference between the zonal LMP billed to the LSE for the customer's load without the reduction and the retail rate "refunded" to the LSE for the actual reduced load is paid to the third party (or end use customer) that contracted for the reduction. If the load response participant also is an ALM customer and ALM is called for concurrently with a reduction under the 2001-2002 Pilot Program, the customer receives payments under the program only for load response during the time ALM obligations are not in effect. In addition, any load response in excess of the contracted ALM amount is compensated under the 2001-2002 Pilot Program for the entire duration of the response.

Results

Participation

A total of 24 companies submitted applications for the 2001-2002 Pilot Program. The applications covered 50 different locations at which load would be reduced and all applications were approved for participation. The total available load reduction associated with these 50 sites was 220 MW. Some companies applied for participation in the program through a third party. Eleven different PJM members participated in the program. Of these 11 members, seven were existing PJM members, three applied for special PJM membership, and one joined PJM as a full member for the purpose of participating in the Pilot Program.

[4] In the event that a party contracting for a load reduction is the LSE that actually serves the load and chooses not to register for the 2001-2002 Pilot Program, PJM does not make any special adjustments in the settlement process.

Of the 220 MW of load reduction approved for participation in the 2001-2002 Pilot Program, approximately 13 MW was from participants with the ability to supply required load via local generation. This represents a reduction from the 40MW of load reduction that relied on local generation in the 2000 Pilot Program. This reduction may have been the result of the addition, in the 2001-2002 Pilot Program, of a requirement to submit applicable environmental permits for local generation used to support a load reduction. A few customers signed up for the program and later withdrew their applications upon learning that their current environmental permits were inadequate for participation.

ALM participants accounted for about 75% of the MW participation in the 2001-2002 Pilot Program. Of the 220 MW of load reduction approved for the program, 164 MW was also enrolled in the ALM program.

Implementation

The emergency option was implemented by PJM on three separate occasions in 2001 for a total of 17 hours during the summer. On July 25, 2001, the program was initiated at 1300 hours and cancelled at 1725 hours. On August 8, 2001, the program was initiated at 1240 hours and cancelled at 1800 hours, and on August 9, 2001, the program was initiated at 1120 hours and cancelled at 1900 hours. In 2001, reductions under the economic option of the program also took place on the above mentioned days as well as on August 7, and August 10, 2001. The reduction on each of these days is shown below in Table 1.

The maximum reduction in load, of 62 MW, occurred on August 9. This represented only about 0.1% of load. Average load reductions over the hours during which the program was active were about 23 MW, of which 1.5MW was economic and 21.4 was emergency. Total payments made under the program were about $300,000 and the average payment was about $700 per MWH of load reduction. Table 2 compares the results for the emergency and economic options under the Pilot Program.

The maximum reduction in load under the ALM program was about 1,800 MW, also on August 9. Average ALM-related load reductions, over the same hours as the Pilot program, were 682 MW. Table 1 compares total Pilot Program related load reductions to total ALM related load reductions.

Table 1. 2001-2002 Pilot Program and ALM Summary

Total Hourly Reductions (MW)										
	July 25		August 7		August 8		August 9		August 10	
	Pilot	ALM	Pilot	ALM	Pilot	ALM	Pilot	ALM	Pilot	ALM
Hour										
10					5.3					87
11		43			5.3	185		37		337
12		114		169	6.2	328	29.5	397	0.1	978
13		450		249	38.7	693	41.1	1,291	0.2	1,718
14	0.3	736		139	7.8	1,484	12.5	1,677	0.8	1,688
15	20.6	1,076	0.1	355	14.5	1,635	15.1	1,761	0.8	1,344
16	24.8	1,431	0.2	390	16.1	1,712	17.3	1,790		613
17	16.7	1,481	0.3	380	17.5	1,665	21.2	1,796		71
18	18.5	1,176	0.2	373	19.8	1,712	19.9	1,762		32
19		790		233	5.3	1,149	62.4	1,357		
20		258		136	1.2	220	0.7	506		
21		12		22		190	0.7	13		
22				22			0.7			
23				22						
24										
Maximum Reductions (MW)										
	24.8	1,481	0.3	390	38.7	1,712	62.4	1,796	0.8	1,718
Total Daily Reductions (MWh)										
	80.9	7,565	0.8	2,489	137.7	10,973	221.1	12,385	1.9	6,780

Price Impacts

It is difficult to measure the price impacts of the Pilot Program very precisely as the result of the size and frequency of the actual load reductions under the Pilot Program. However, based on the data, the aggregate price impacts of the Pilot Program can be characterized accurately. The average hourly MW reduction in load over all hours during which ALM was called or the Pilot Program utilized was about 1,200 MW. The average price impact of the aggregated associated demand reduction over these hours was about $135/MWh. In other words, in the absence of the demand reductions associated with ALM and the Pilot Program, prices would have been higher by about $135/MWh on average for the hours during which demand side programs were activated.

As a measure of the potential of DSM programs to impact price, there would have been a further reduction in the system price of about $300/MWh if an additional 2,000 MW of load reductions had been made during the hours when existing programs were activated during the summer of 2001. More generally, the price impacts of load reductions depend on the shape and position of the supply curve which in turn is determined by the offers of individual generating units. For the hours during which DSM programs were invoked in the summer of 2001, the result was an average price impact of from $15 to $16 per MWh for every 100 MW of load reduction. This impact is a direct function of the shape and position of the supply curve during these hours.

The price impact of load reductions is also a function of the location of the load reductions when congestion is present. If prices are high in a congested area and low everywhere else in the system, the reduction of load in the congested area could have a significant price impact while the reduction of load elsewhere would be likely to have no significant impact on price.

The data examined may understate the potential system and locational price impacts during periods of high prices. The observed price impacts during the summer of 2001 were the result of the combined DSM programs and were dominated by the impact of the ALM program. The expected peak load of the system, which determines the capacity obligations of the market participants, is calculated net of the ALM resources. Thus, when load is expected to exceed available resources, ALM is called upon to curtail in order to maintain reliability. During these high load hours, net of curtailed ALM, the system is at the high end of the supply curve where price impacts of load changes are relatively large. In these hours the observed price impacts of ALM could be relatively small, while the reliability impacts are large. However, the potential price impacts of economic curtailments during such high load hours are large. For example, taking only the hours when the LMP exceeded $600/MWh, the price impact of an additional 2,000 MW load reduction would have been about $400/MWh, an increase of one third over the impact measured over all the hours during any DSM program was called upon.

The load reductions under the Pilot Program were modest. Part of the issue is that the emergency option is relatively new and the economic option was approved on May 30, which did not leave much time to market the program to customers. The fact that 75% of the MW participation in the Pilot Program was from existing ALM customers is consistent with the view that PJM members are in the early phase of the learning curve. The complexities of actually marketing and implementing customer load response should not be underestimated.

While the ALM program is a form of an emergency program, it relies on economic choices in the same way that the economic program does. ALM customers have made explicit choices to permit curtailments, limited by specified conditions, in return for significant reductions in retail prices. As a result of the fact that ALM customers and their LSEs guarantee curtailments when called, ALM is considered a firm resource. That firmness increases the value of ALM because it permits the avoidance of capacity obligation and the associated costs of capacity.

PJM and its members should consider new design features that make load reductions more attractive economically while retaining a clear and explicit link between payment for this resource and its economic value as measured by LMP. One design feature to consider is a firm option that would permit the avoidance of capacity payments. Like other firm resources, including ALM, there would be negative consequences for non-performance. For example, during the summer of 2001, certain ALM resources did not perform and paid significant penalties as a result.

Impact of Pilot Program on Existing DSM Programs

In PJM Interconnection, L.L.C., 95 FERC ¶ 61,306 (2001), the Commission required PJM "to include, insofar as possible, an assessment of whether its Load Response Program is obtaining demand reduction for PJM largely or solely at the expense of PJM members' DSM programs, and if so, by how much."

The only PJM member DSM programs for which PJM has detailed, systematic information are the ALM programs. As noted above, ALM participants accounted for about 75% of the MW participation in the 2001-2002 Pilot Program. There is no evidence however that the Pilot Program in 2000 or 2001 had any negative impact on the ALM program. In fact, the Pilot Program was explicitly designed to give the suppliers of ALM an incentive to provide additional curtailability while ensuring that existing ALM arrangements were not impacted.

Table 3 below shows the level of MW participation in the ALM program for 1999 to 2001 and the level of MW participation in the Pilot Program for 2000 and 2001. The ALM program was modified in 1999, including the definition and measurement of ALM. These changes mean that the data for 1999 probably overstate the level of ALM for purposes of comparison with the level of ALM in subsequent years.

Table 3. 2001-2002 Pilot Program and ALM History

	1999	2000	2001
ALM Resources (MW)	2,005	1,693	1,962
Pilot Program Resources (MW)	NA	80	220

Program Implementation Issues

There were several measurement issues encountered during the implementation of the 2001-2002 Pilot Program. The 2001-2002 Pilot required the EDC to respond to PJM within two business days after receipt of a customer's proposed measurement plan, or PJM

assumed acceptance. One customer indicated to PJM at the time of application for participation in the program that the EDC had approved the load reduction measurement plan. However, after a reduction had taken place, the EDC informed PJM that no such approval had been given regarding the metering scheme employed by this customer. The EDC allowed the customer to continue to participate in the pilot and did not dispute the payment distributed to the customer for the events in question. Future demand response programs should allow more time for the EDC to verify that each customer has sufficient metering in place to support participation and require the EDC to report the results of its verification process.

Another customer experienced a meter failure on the days when reductions were accomplished. It took about two months for the customer to receive estimated meter readings from the EDC and significantly delayed payment of the reduction credit to the customer. Ultimately, the EDC compensated the customer based on the nameplate load of the two processes that were shut down to achieve the load reduction. Future demand response programs operated by PJM should more specifically detail procedures to be followed in the event of meter failures during reduction events in order to avoid the need for after the fact negotiation among customers, EDCs and/or LSEs.

Environmental issues were a concern for some potential participants in the 2001-2002 Pilot Program. Several end-use customers that had signed up to participate in the 2000 program applied again to participate in the 2001-2002 Pilot, but withdrew their applications because environmental permits would not allow them to operate their generators unless an emergency had resulted in physical disconnection from the grid. The issue of exactly what constitutes an emergency condition will need continued examination and a cooperative effort between environmental and energy regulators if development of demand-side programs based on distributed generation is to continue.

Participant Reaction

An informal survey of PJM participants' opinions included:

- Positive aspects of the program included the voluntary nature of the program and the associated lack of any penalties, the simplicity and flexibility of the program, and a relatively good potential return upon implementation.
- Negative aspects of the program included the nature of notification (email or pager) and the lack of a guaranteed revenue stream, i.e. – no capacity component.
- Metering was a major issue for some customers due to the installation expense and the uncertainty involved with the calculation of the actual load reduction as prescribed by the Pilot Program.

Next Steps

The PJM Members Committee created a Task Force to develop a set of principles on which demand-side programs should be based. The intent was to present these principles

to the PJM Members Committee for approval prior to development of further demand response programs by a Working Group.

The PJM Members Committee endorsed the principles developed and presented by the Demand Side Response Task Force at its October, 2001 meeting, with certain modifications. These modified principles are attached as Appendix B. The Demand Side Response Working Group (DSRWG) was created under the Energy Market Committee to apply those principles and develop an ongoing demand response program for implementation on or before June 1, 2002. The DSRWG effort to develop this program is currently under way.

The Working Group is evaluating the adoption of program elements that have been implemented in other areas. For example, the Working Group is considering a standardized method for calculating customer baseline loads against which actual load may be compared in order to compute reductions. The Working Group is considering the NYISO baseline methodology as one option for providing a standardized baseline method.

Jurisdictional concerns continue to be an issue for some PJM participants. PJM is actively encouraging discussion of these issues among regulatory agencies, and these issues will need to be resolved in order for consensus to be reached on an ongoing program.

Table 2. 2001-2002 Pilot Program Reduction Summary

Total Hourly Reductions (MW)

Hour	July 25			August 7			August 8			August 9			August 10			Totals
	Econ.	Emerg.	Total	Econ.	Emerg.	Total	Econ.	Emerg.	Total	Econ.	Emerg.	Total	Econ.	Emerg.	Total	
10							5.3		5.3							
11							5.3		5.3							
12							6.2		6.2		29.5	29.5	0.1		0.1	
13							5.4	33.3	38.7	0.7	40.4	41.1	0.2		0.2	
14	0.3		0.3				1.4	6.4	7.8	0.7	11.8	12.5	0.8		0.8	
15	0.6	20.0	20.6	0.1		0.1	2.0	12.5	14.5	0.7	14.4	15.1	0.8		0.8	
16	0.5	24.3	24.8	0.2		0.2	1.9	14.2	16.1	0.7	16.6	17.3				
17	0.5	16.2	16.7	0.3		0.3	1.7	15.8	17.5	0.7	20.5	21.2				
18	0.4	18.1	18.5	0.2		0.2	1.8	18.0	19.8	0.7	19.2	19.9				
19							5.3	0.0	5.3	0.7	61.7	62.4				
20							1.2	0.0	1.2	0.7		0.7				
21										0.7		0.7				
22										0.7		0.7				
Maximum Reductions (MW)																
	0.6	24.3	24.8	0.3	0.0	0.3	6.2	33.3	38.7	0.7	61.7	62.4	0.8	0.0	0.8	
Total Daily Reductions (MWh)																
	2.3	78.6	80.9	0.8	0.0	0.8	37.5	100.2	137.7	7.0	214.1	221.1	1.9	0.0	1.9	442.4
Total Payments ($)																
	$511	$48,954	$49,465	$269	$0	$269	$7,986	$73,196	$81,182	$4,286	$165,364	$169,650	$942	$0	$942	$301,509
Average Payment ($/MWh)																

	$222	$623	$611	$337		$337	$213	$730	$590	$612	$772	$767	$496		$496	$682

Appendix A: Existing Pilot Program Outstanding Issues

Issue	Majority Opinion	Minority Opinion
Special PJM Membership	Should be retained for the emergency program	Should be eliminated for both programs
Floor Price	Should be retained for the emergency program	Should be eliminated for both programs
Eligibility of ALM customers	ALM customers eligible for both programs	ALM customers ineligible for both programs
Refund of G&T charges	Charges should NOT be refunded to EDCs	Charges should be refunded to EDCs
Licensing of Participants as LSEs	No requirement for LSE licensing	LSE licensing required for participation
Revenue allocation for economic program	Collect from LSE serving customer's load	Socialize similar to emergency program
Payment of LSE A&G	Program should NOT provide mechanism	Program should provide a mechanism
Pilot Expiration Date	May 31, 2002	September 30, 2001

Appendix B: PJM Demand Side Response Task Force
Principles Governing PJM Demand-Side Programs

1. DSR programs should be market-based, and, to the extent possible, not involve command and control, penalties or subsidies. At some future point, it is envisioned that load response will be purely market-driven.
    a. Price: To the extent practicable, the payments/ revenues under an economic load response program should reflect response to day-ahead or real time price.
    To the extent possible, the payments/revenues under an emergency program should reflect the value of the reduction to the system.
    b. Load response programs should not supercede contractual obligations.
    c. Price-responsive load should have the same ability as generation to submit three-part bids and operating restrictions, and this may require socialization of uplift costs in order to provide similar bidding incentives.
    d. Market-based penalties may be appropriate only when compensation for capacity is an element of load response payments/revenues.

2. An emergency load response program is necessary, and this need should be assessed periodically.
    a. This program should address the needs of those customers that are only able to respond during emergencies.
    b. The need for an alternate payment mechanism, including alternate cost allocation, may remain in order to achieve the volume of load reduction necessary to contribute to reliability.
    c. Any emergency payment mechanism should not discourage participation in an economic program or facilitate gaming.
    d. Ease of participation, limitation of liability, and other factors may be necessary to spur participation in an emergency program.

3. Interactions between ALM and DSR programs need to be addressed.
    a. Payments must be synchronized between all programs. That is, customers cannot be compensated under multiple programs for the same reduction.
    b. ALM requirements are always satisfied first, as long as the ALM commitment is active.
    c. Measurement of load reductions should be consistent among all programs.

4. All market participants should be treated fairly and equitably, and be permitted to participate openly in all PJM markets. This does not necessarily mean all participants need to be treated identically.
5. PJM should be proactive in publishing open standards with regard to interfaces necessary for DSR market participation that are as technology neutral as practicable.
    a. PJM should make every effort to ensure that such standards are compatible with other ISO programs.

b. PJM should be responsive to customer needs while ensuring the overall membership is not exposed to significant cost in order to satisfy the request of a single participant.

6. DSR programs should, to the extent possible, identify and overcome current issues in the near term, such as:
    a. Retail rate caps and EDC recovery of fixed costs
    b. Lack of hourly meters
    c. Fixed load profiling
    d. Difficulty in measuring actual load reduction
    e. Tariff inconsistencies and incompatibilities
    f. Lack of economic incentives to develop a market structure.

    These types of issues should be communicated to regulatory agencies or others, as required.

7. Sensitivities to direct, end-use customer participation in wholesale markets should be identified.
    a. The need for EDC cost recovery must be addressed, and agreement achieved on the method of cost recovery.
    b. State commission/board representative participation in development of DSR programs will be requested.
    c. PJM should discuss jurisdictional issues with state commissions/boards.

8. DSR programs should clearly indicate the value of the product and ensure symmetry between supply and demand sides
    a. PJM should first look to alter existing markets to incorporate DSR.
    b. PJM should facilitate the development of new markets if existing markets prove inadequate.

9. The roles of all participating entities should be clearly defined, including such tasks as verification of metered reductions, tracking of ALM customers, etc.