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IMPACT OF THE DEMAND-SIDE MANAGEMENT (DSM) PROGRAM STRUCTURE ON THE COST-EFFECTIVENESS OF ENERGY EFFICIENCY PROJECTS

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IMPACT OF THE DEMAND-SIDE MANAGEMENT (DSM) PROGRAM STRUCTURE ON THE COST-EFFECTIVENESS OF ENERGY EFFICIENCY PROJECTS

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ABSTRACT

Pacific Northwest Laboratory (PNL)[1] analyzed the cost-effective energy efficiency potential of Fort Drum, a customer of the Niagara Mohawk Power Corporation (NMPC) in Watertown, New York. Significant cost-effective investments were identified, even without any demand-side management (DSM) incentives from NMPC. Three NMPC DSM programs were then examined to determine the impact of participation on the cost-effective efficiency potential at the Fort. The following three utility programs were analyzed: 1) utility rebates to be paid back through surcharges, 2) a demand reduction program offered in conjunction with an energy services company, and 3) utility financing. Ultimately, utility rebates and financing were found to be the best programs for the Fort.

This paper examines the influence that specific characteristics of the DSM programs had on the decision-making process of one customer. Fort Drum represents a significant demand-side resource, whose decisions regarding energy efficiency investments are based on life-cycle cost analysis subject to stringent capital constraints. The structures of the DSM programs offered by NMPC affect the cost-effectiveness of potential efficiency investments and the ability of the Fort to obtain sufficient capital to implement the projects. This paper compares the magnitude of the cost-effective resource available under each program, and the resulting level of energy and demand savings. The results of this analysis can be used to examine how DSM program structures impact the decision-making process of federal and large commercial customers.

INTRODUCTION

This paper explores DSM from the perspectives of both the utility and the federal customer. The paper specifically addresses the DSM programs offered by Niagara Mohawk Power Corporation (NMPC) to Fort Drum, New York. Following the background information is a discussion on the utility objectives, including the potential tools available to the utility that would allow it to meet its objectives. The next section discusses the federal customer's perspective including objectives and constraints. These two sections come together in the fourth section, when the customer evaluates the utility's DSM programs. The fifth section presents the outcome under each of the programs, including a look at which alternative achieves the customer's objectives and which alternative achieves the utility's objectives.

BACKGROUND

The federal government is the single largest energy consumer in the United States with an annual consumption of 1.46 quadrillion Btu (quads) of energy during fiscal year 1991 (FY91). While over half of this total is jet fuel, federal buildings consumed about 0.41 quads of energy in FY91. It has been estimated that with the implementation of the most life-cycle cost-effective technologies, between 25% and 40% of the annual energy

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bill for buildings could be saved. The Energy Policy Act (EPAct) was issued in 1992 and included a directive that requires federal agencies to reduce their energy consumption by 20% from 1985 levels by the year 2000. In an effort to assist federal agencies in meeting EPAct, the U.S. Army Forces Command (FORSCOM) tasked the U.S. Department of Energy's (DOE) Federal Energy Management Program (FEMP) supported by PNL to identify, evaluate, and assist in acquiring all cost-effective energy projects at Fort Drum.

As a part of this effort, PNL was asked to evaluate a DSM program offered by NMPC. The DSM program levies an additional charge per kilowatt-hour (kWh) on the customer's electricity bill. The charge is called the Demand-Side Management and Revenue Adjustment Recovery Mechanism (DIRAM) charge and was projected to be between $0.0014 and $0.0024 per kWh in 1993. If Fort Drum chooses to participate in the program, it will be eligible to receive rebates for lighting and motor energy resource opportunities (ERO). The Fort will also be eligible to participate in the CES\Way program, consisting of the CES\Way energy service company (ESCO) evaluating and installing efficiency measures, and obtaining an incentive for demand reduction from NMPC. If Fort Drum chooses to drop out (opt out) of the DSM program, it will not be eligible to receive rebates or participate in the demand incentive program.

THE UTILITY PERSPECTIVE

During the late 1980s, the concepts of DSM and integrated resource planning (IRP) gained popularity with state Public Utility/Public Service Commissions (PUCs/PSCs) as ways in which a growing future electricity demand could be met. For those utilities already faced with supply constraints, the idea of DSM was met with interest; while those utilities that had supply forecasts equal to or greater than their demand forecasts were less enthusiastic. Nevertheless, PUCs and PSCs began requiring utilities to file IRPs and to set goals for obtaining part of the electricity supply through DSM, subject to approval by the PUC/PSC. Meanwhile, the utilities were struggling with issues such as recovering the costs of providing financial incentives to customers while meeting supply goals through load reduction.

According to NMPC's 1991 Integrated Demand-Side Management Plan (NMPC 1991), the utility's goal with respect to DSM is "to promote the efficient use of electric energy resources." In 1992, NMPC proposed to offer a DSM program to its largest commercial and industrial (C&I) customers giving them the opportunity to "opt-in" or "opt-out" of the program. All C&I customers would pay 60% of the DSM program costs, but only those customers who stayed in the program would be required to pay the other 40%. In opting out of the program, the customer would still be eligible to participate in a shared savings program.

NMPC's DSM subscription option provided two choices: 1) a subsidized option, where the customer would remain in the base DSM programs and be eligible to receive rebates and incentives, and 2) a non-subsidized option, where the customer could participate in a "shared savings" program, but would not be eligible to receive rebates or incentives. If the customer chose to participate in the subsidized option, then the customer would be charged through the DIRAM for the utility to recover some of the costs of the rebate and incentive programs. In either case, the customer would pay some of the cost of the DSM program through their base rate. The subscription option would be available and renewable in 2-year increments.

There are three different tools that NMPC has defined: rebates, subscriptive service, and financing. The merits of each of the tools is discussed from a utility perspective below.

Rebates

Rebate programs have become relatively common tools used by utilities as part of their DSM program. The purpose of the rebate program is to encourage the customer to buy equipment that is more energy-efficient by reducing the cost premium that is often associated with higher efficiency models as compared to standard efficiency models.

Under the rebate program, part of the installed cost of eligible equipment is offset by a rebate provided by NMPC. There are constraints applied to the rebate program: the maximum dollar amount per year for rebates is equivalent to 25% of the customer's annual electric bill; and within 5 years, the customer cannot collect more than 100% of the annual electric bill.

Another constraint applied to the program is that the rebate dollar value received by the customer must be repaid by the customer's payments under the DIRAM charge. Because the DIRAM charge is meant to pay for the value of all rebates given, the rebate is essentially a zero-interest loan. If a customer were to participate in the rebate program, then the customer would also be required to either stay in the DSM program until the cumulative DIRAM charges covered the cost of the

rebates or would be required to pay the remaining balance if opting out before the DIRAM charges had covered the rebate cost.

Whether this arrangement is "good" financially for the utility depends on the total amount of the rebates that the customer actually takes. If the customer's total rebate amount equals the DIRAM charge over the 2-year period (or multiple of a 2-year period), then the customer benefits because it has essentially received a zero-interest loan, paid back over the time period. This is a loss to the utility due to general inflation of the dollar. If the customer takes rebates that would require less than 2 years to pay back, then the utility comes out ahead because the customer is required to pay DIRAM charges for the full 2 years. Depending on the time required to pay back the rebate, the interest equivalent could be quite high. If a customer chose to opt in initially, and then opted out after the 2-year period, but still owed money, the utility would obtain the remaining balance in one lump sum. In this instance, the utility has recovered its initial cost but has lost value due to inflation of the dollar.

Subscriptive Service

The second tool NMPC is offering is referred to as "Subscriptive Service." In this program, the utility acts as a facilitator between the customer and an ESCO; in this case, CES\Way.

Under the CES\Way program the installed cost of measures is reduced through a demand incentive paid to CES\Way by NMPC. The incentive in January 1993 was $1,025.75 per kilowatt (kW) for measures that reduce summer peak, and $1,460 per kW for measures that reduce winter peak. NMPC has contracted with CES\Way to reduce 8 megawatts (MW) by 1995. According to CES\Way, the ESCO had contracted with customers to reduce 3.5 MW in January 1993 and was in discussions with others to meet the 8.0 MW reduction. Therefore, CES\Way has obtained or is obtaining the entire 8-MW demand reduction, and unless NMPC extends the contract, or negotiations fall through with other customers, Fort Drum will not be able to participate in the CES\Way program.

As with the rebate case, the utility benefits most when the customer's total DIRAM charges outweigh the incentive paid to the ESCO. If the incentive is equal to the DIRAM charges paid over a 2-year period (or multiple of 2-years), or if the customer pays the remaining balance at the end of a 2-year period, then the utility has lost money due to the inflation of the dollar.

Financing or Shared Savings

The third tool available to the customer is a shared savings program which is available to customers whether they chose to opt in or opt out of the base DSM program. In this case, the utility acts as a bank by providing the financing for installation of energy efficiency measures. In January 1993, NMPC estimated that the interest rate would be 10.2%. This type of program provides the utility with the energy savings needed to reach its DSM goal and also allows the utility to recover its cost.

THE FEDERAL CUSTOMER PERSPECTIVE

The federal customer also works toward a set of objectives. Due to the passage of EPAct, the federal customer must work to reduce its overall energy usage. In doing so, the federal customer is mandated to minimize the life-cycle cost of its energy services. Additionally, the reliability of both the energy supply and the equipment cannot be compromised, particularly when the federal customer is a military installation.

The federal customer operates under a set of constraints as it works to meet these energy objectives. The greatest constraint is monetary, as federal agencies are funded through the federal budgeting process. While provisions have been made recently to allow federal customers to use utility financing for energy equipment investments, the capital constraint remains in effect. The combination of federal regulations can also constrain federal customers, particularly military installations. On the one hand, federal agencies must reduce their energy usage 20% over 1985 levels by the year 2000. On the other hand, they must also minimize the life-cycle cost of energy investments by choosing the minimum life-cycle cost alternative. Military installations, due to their size, are often eligible for lower energy rates than the regional average. This lowers the energy cost savings, and for some energy-efficient equipment, the investment cost relative to the energy cost savings becomes high enough so that the measure does not meet the cost-effectiveness criteria. Because EPAct requires a 20% reduction in energy over 1985 levels by the year 2000, federal customers need to consider all energy-saving measures and not just those that provide big savings relative to the investment required.

EVALUATION

The customer's objectives merge with the utility objectives when the customer evaluates the utility's programs. This section presents the evaluation of each of the utility programs from the customer's (Fort Drum's) perspective. It was assumed that NMPC would

provide financing at a nominal rate of 10.2%, CES\Way would provide financing at 12.0%, and federal financing would be available at 7.9%.

Rebate Program

One option Fort Drum has if it chooses to stay in the DSM program is the chance to obtain rebates for lighting and motor EROs. Under the rebate program, part of the installed cost of eligible equipment is offset by a rebate provided by NMPC. This analysis assumed that all EROs eligible for rebates could be implemented. Under this option, three cases were explored. The first case (the base case) assumed that Fort Drum would opt out of the DSM program and implement the EROs using federal financing. The second case (the worst case) assumed that while Fort Drum would remain in the DSM program and receive the rebates, most of the other eligible NMPC customers would have opted out of the program resulting in a high DIRAM charge. Fort Drum would finance this option through NMPC financing. The third case (the best case) assumed that Fort Drum would remain in the DSM program and receive the rebates, but assumed that most of the other eligible NMPC customers were also participating in the DSM program resulting in a low DIRAM charge. For the third case, it was assumed that federal financing would be used. All three cases assumed that the same group of EROs would be implemented. The EROs were selected from a list of "selected" EROs presented in the report, *Fort Drum Integrated Resource Assessment Volume 3: Resource Assessment* (Dixon et al. 1992). Table 1 provides the components of the rebate program versus the base case of federal financing. Table 2 presents the net present value (NPV) of the first 16 years for each case. This time frame includes a 1-year program lag and a 15-year loan repayment term.

Results indicate that the base case is marginally more cost-effective than the worst case, and that the rebate program in the best case is marginally more cost-effective compared to the option of opting out forever. The analysis assumed that Fort Drum would stay in the DSM program until the rebate cost had been recovered by NMPC. If the DIRAM charge is high, the amount of time required to pay off the rebate amount is 10 years, while the amount of time required assuming the low DIRAM charge is 16 years. These results indicate that whether the rebate program is cost-effective depends on the DIRAM charge. If the DIRAM charge is expected to be high, then the Fort should opt out of the program. If the DIRAM charge is expected to be low, then the Fort should remain in the program.

Table 1. Components of Rebate Program versus Federal Financing

	Rebate Program	Base Case
Installed Cost	$6,972,500	$6,972,500
Rebate Amount	$1,557,500	$0
Financing Required	$5,712,000 (NMPC - 2 yr) $6,221,800 (Federal - 5 yr)	$7,533,600
Energy Savings (MBtu)	54,144	54,144
Value of Energy Savings	$1,080,300	$1,080,300

Table 2. Net Present Value of Energy Savings

Case	Net Present Value
Base Case: Federal Financing	$3,879,500
Worst Case:[1] NMPC Financing and High DIRAM	$3,837,500
Best Case:[2] Federal Financing and Low DIRAM	$4,234,000

[1] Worst case refers to the scenario under which the rebate program is least attractive.
[2] Best Case refers to the scenario under which the rebate program is most attractive.

Subscriptive Service

PNL analyzed the cost-effectiveness of participating in the CES\Way program (Subscriptive Service), so as to be prepared in the event that NMPC extends the contract with CES\Way. Various alternatives within this option were explored. The first and second alternatives assumed a 3-MW cap on implementable EROs. The third alternative assumed that it would be possible for Fort Drum, through CES\Way, to implement all demand reducing measures. The EROs were selected from a list of "selected" EROs presented in the report, *Fort Drum Integrated Resource Assessment Volume 3: Resource Assessment* (Dixon et al. 1992). These alternatives are explained more thoroughly below.

The first alternative assumed a 3-MW contract ceiling on implementable EROs, with no restrictions as to the EROs that would be eligible for implementation. This would allow for the implementation of peak-shaving EROs. Under this alternative, three cases were explored. The first case (the base case) assumed that Fort Drum would opt out of the DSM program and implement the EROs using federal financing. The second case (the worst case) assumed that while Fort Drum would remain in the DSM program and participate in the CES\Way program, most of the other eligible NMPC customers would have opted out of the program resulting in a high DIRAM charge. The third case (the best case) also assumed that Fort Drum would remain in the DSM program and participate in the CES\Way program, but also assumes that most of the other eligible NMPC customers were also participating in the DSM program resulting in a low DIRAM charge. Under both the program participation cases, the NMPC incentive was assumed to be sufficient to cover the installed cost of the measures, making financing unnecessary. All three cases assumed that the same group of EROs would be implemented. Due to the low installed cost of these measures, the demand incentive would pay entirely for the implemented EROs. Table 3 presents the components of the CES\Way program assuming a 3-MW contract ceiling versus the base case of federal financing. Table 4 presents the NPV of the energy savings for the first 16 years for each case. This time period includes a 1-year program lag and a 15-year loan repayment term.

The resulting highest and lowest NPVs of the cases analyzed differed by 6%, with the base case NPV almost

Table 3. Components CES\Way Program versus Federal Financing (Assuming 3-MW Contract Ceiling)

	CES\Way Program	Base Case
Installed Cost	$269,400	$269,400
Profit	$145,500	$0
Incentive Amount	$430,500	$0
Financing Required	$0	$279,500
Energy Savings (MBtu)	-22,260	-22,260
Demand Savings (MW)	3.0	3.0
Value of Energy Savings	$323,200	$323,200

Table 4. Net Present Value of Energy Savings

Case	Net Present Value
Base Case: Federal Financing	$3,076,700
Worst Case:[1] CES\Way Program and High DIRAM	$2,926,700
Best Case:[2] CES\Way Program and Low DIRAM	$3,097,200

[1] Worst case refers to the scenario under which the CES\Way program is least attractive.
[2] Best Case refers to the scenario under which the CES\Way program is most attractive.

equal to the best case. If the charge levied to participate in the program (the DIRAM charge) is assumed to be $0.0024 per kWh, the cost-effectiveness of the CES\Way program is marginally less than the cost-effectiveness of the base case. This indicates that it would be best to opt out of the program. Using the lower boundary for the DIRAM charge, however, at $0.0014 per kWh, the cost-effectiveness of participating is marginally greater than the base case. The lower DIRAM charge indicates that it would be better to stay in the DSM program. A sensitivity analysis was performed on the DIRAM charge, with the results indicating a break-even DIRAM charge of $0.0015 per kWh. At this DIRAM charge, the NPV of energy savings for staying in the DSM program is equal to the NPV of energy savings for opting out of the DSM program.

The second alternative assumed a 3-MW contract ceiling on implementable EROs but assumed that no peak-shaving EROs would be implemented. Under this alternative, three cases were explored. The first case (the base case) assumed that Fort Drum would opt out of the DSM program and implement the EROs using federal financing. The second case (the worst case) assumed that while Fort Drum would remain in the DSM program and participate in the CES\Way program, most of the other eligible NMPC customers would have opted out of the program resulting in a high DIRAM charge, with financing provided by CES\Way. The third case (the best case) assumed that Fort Drum would remain in the DSM program and participate in the CES\Way program and that most of the other eligible NMPC customers were also participating in the DSM program resulting in a low DIRAM charge, and that federal financing would be used. All three cases assumed that the same group of EROs would be implemented. In this case, more EROs are implemented and the installed cost is greater than the incentive amount. The resulting highest and lowest NPVs of the cases analyzed differed by 57%, with the base case representing the lowest NPV. The results indicate that in this situation, the DSM program is more cost-effective than the base case. Table 5 presents the components of the CES\Way program assuming a 3-MW contract ceiling and no peak shaving EROs versus the base case of federal financing. Table 6 presents the NPV of the energy savings for the first 16 years for each case. This

Table 5. Components of CES\Way Program versus Federal Financing (Assuming 3-MW Contract Ceiling - No Peak Shaving ERO)

	CES\Way Program	Base Case
Installed Cost	$3,764,200	$3,764,200
Profit	$2,032,700	$0
Incentive Amount	$4,338,800	$0
Financing Required	$1,625,600	$3,905,400
Energy Savings (MBtu)	44,270	44,270
Demand Savings (MW)	3.0	3.0
Value of Energy Savings	$867,500	$867,500

Table 6. Net Present Value of Energy Savings

Case	Net Present Value
Base Case: Federal Financing	$4,616,100
Worst Case:[1] CES\Way Financing and High DIRAM	$6,681,000
Best Case:[2] Federal Financing and Low DIRAM	$7,233,100

[1] Worst case refers to the scenario under which the CES\Way program is least attractive.
[2] Best Case refers to the scenario under which the CES\Way program is most attractive.

time period includes a 1-year program lag and a 15-year loan repayment term.

The third alternative assumed that all demand-reducing EROs could be implemented. Under this alternative, three cases were explored. The first case (the base case) assumed that Fort Drum would opt out of the DSM program and implement the EROs using federal financing. The second case (the worst case) assumed that while Fort Drum would remain in the DSM program and participate in the CES\Way program, most of the other eligible NMPC customers would have opted out of the program resulting in a high DIRAM charge. It was also assumed that EROs under the second case would be financed through CES\Way. The third case (the best case) assumed that Fort Drum would remain in the DSM program and participate in the CES\Way program, but assumed that most of the other eligible NMPC customers were also participating in the DSM program resulting in a low DIRAM charge. For the third case, it was assumed that federal financing would be used. All three cases assumed that the same group of EROs would be implemented. This case assumed no contract ceiling, so all demand-reducing measures could be implemented through the CES\Way program for a total demand reduction of over 6,900 kW. Table 7 presents the components of the CES\Way program assuming no contract ceiling versus the base case of federal financing. Table 8 presents the net present value of the energy savings for the first 16 years for each case. This time period includes a 1-year program lag and a 15-year loan repayment term.

Under this scenario, the base case of opting out of the program has the lowest NPV, with the best and worst cases for staying in the DSM program approximately equal to each other. Because the difference between the highest and lowest NPVs is large (91%), the results indicate that if Fort Drum were able to implement all demand saving EROs and receive the full demand incentive amounts, then it would be most cost-effective to remain in the DSM program.

These results indicate that if program constraints were not in place prohibiting Fort Drum's participation in the CES\Way program, Fort Drum should participate in the DSM program in order to be eligible for the CES\Way program. Because of the constraints, Fort Drum should

Table 7. Components CES\Way Program versus Federal Financing (Assuming No Contract Ceiling)

	CES\Way Program	Base Case
Installed Cost	$7,340,700	$7,340,700
Profit	$3,964,000	$0
Incentive Amount	$10,088,200	$0
Financing Required	$1,640,400	$8,218,800
Energy Savings (MBtu)	32,610	32,610
Demand Savings (MW)	6.9	6.9
Value of Energy Savings	$1,416,500	$1,416,500

Table 8. Net Present Value of Energy Savings

Case	Net Present Value
Base Case: Federal Financing	$6,734,600
Worst Case:[1] CES\Way Program and High DIRAM	$12,322,400
Best Case:[2] CES\Way Program and Low DIRAM	$12,881,100

[1] Worst case refers to the scenario under which the CES\Way program is least attractive.
[2] Best Case refers to the scenario under which the CES\Way program is most attractive.

not remain in the program to participate in the CES\Way program. If the CES\Way program were to be expanded, however, Fort Drum should reconsider signing up for the DSM program.

Financing or Shared Savings

If Fort Drum were to opt out of the base DSM programs, it would not be eligible for rebates or incentives but would still be able to utilize NMPC financing. If NMPC financing is compared to a base case where EROs are implemented using federal financing, NMPC financing is not cost-effective because of the higher interest rate. Realistically, however, federal financing is difficult to obtain because the Fort is subject to the federal budgeting process. In addition, while some pots of money have been made available to federal facilities to assist in the installation of energy efficiency measures, facilities must submit applications and compete against other facilities for these types of funds. Because federal funds are scarce, NMPC financing should be considered a viable source of funding.

A more realistic comparison could be made between NMPC financing and ESCO financing. Because NMPC financing is estimated to have a lower interest rate than ESCO financing, NMPC financing would be the more cost-effective solution.

RESULTS

From either perspective, all options have their risks and merits in meeting utility and federal customer objectives. From the federal customer's perspective, the DSM program is only marginally more cost-effective than the option of implementing the EROs using federal financing without participating in the program. Because it is doubtful that Fort Drum would be able to receive federal financing in the amount that it would require to implement all EROs, however, the Fort would need to examine other financing options. If the Fort decided to use NMPC financing, then it would need to evaluate the merits associated with remaining in the DSM program and using the rebates to reduce the loan amount to be paid back with interest. One factor central to this consideration would be whether excess DIRAM charges could be applied to the NMPC loan. If this would not be the case, then the Fort would need to reevaluate the rebate value to determine what the implicit rate of interest would be if the DIRAM charges covered the value of the rebates prior to the end of the 2-year period. If the implicit rate of interest would be higher than 10.2%, then the Fort should opt out of the DSM program and utilize only the NMPC financing. If, however, the implicit interest rate would be less than 10.2%, then the Fort should remain in the DSM program to utilize any available rebates.

From the utility's perspective, the option with the least risk is for the customer to opt out of the program and utilize NMPC financing. In this case, the utility obtains its load reduction and is able to fully recover its costs. The best option is for the Fort to stay in the DSM program and utilize either the subscriptive service or the rebates. When the Fort remains part of the program, the utility can assume that the Fort will make an effort to reduce its load, thereby helping the utility to meet its load reduction objective. The drawback with this option is financial, as it is possible that the utility would not recover the interest on the value of the rebates and incentives. It is also possible that the utility could more than recover its cost of the Fort's participation if the rebate value was paid back through DIRAM charges in a period of much less than 2 years.

CONCLUSIONS

The purpose of DSM is to assist the utility in its quest to acquire the lowest cost resource by providing alternatives to traditional supply options such as the building of new power plants. This purpose also works in the customer's favor, as utilities are generally allowed to recover their costs. If the utility obtains the least cost resource, then the customer benefits by paying the minimum cost recovery amount.

In addition to exploring whether efficiency measures are cost-effective to the customer, they must ideally also be analyzed from the utility perspective. If the cost of efficiency measures is less than the utility's avoided cost, then the utility would want to have the customer install as many of those measures as possible in an effort to acquire the greatest resource. The customer will only install those measures that are cost-effective, however, and DSM incentives help to make borderline measures cost-effective. If the measures remain cost-effective from the utility perspective when DSM incentives are included in their analysis, then the utility would be expected to offer incentives up to their avoided cost. When projected supply is adequate for projected demand, however, the utility lacks an incentive to make DSM programs attractive.

The structure of the DSM program is important. Assuming that the utility wants to acquire the DSM resource, it will acquire the greatest amount under a program with rebates that the customer is not required to pay back. As the customer is required to reimburse the utility, the number of efficiency measures installed decreases. The utility will acquire the least resource

when the customer has to take out a loan, which is what Fort Drum would lean toward. If the DSM objectives are to be met, then the program should be restructured to encourage customers to install the greatest number of efficiency measures.

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