NorthWestern® Energy

SOUTH DAKOTA

Demand Side Management Plan

November 5, 2012

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I. Introduction

A primary benefit of Demand Side Management (DSM) is that it displaces the need to purchase more expensive electric or natural gas resources by reducing customer energy usage through efficiency gains. In that sense, DSM can be viewed as an energy resource. Another important benefit of DSM is that it provides tools individual customers can use to reduce their energy bills without loss of comfort or convenience. Also, environmental benefits are an important aspect of DSM. Energy saved through DSM activities reduces the need for electric generation, and/or consumption of natural gas, and the associated emissions and other environmental impacts.

NorthWestern Energy (NorthWestern or NWE) believes DSM is a necessary and important part of the portfolio of electric and natural gas supplies it acquires to serve the energy needs of its customers. DSM is available in relatively small and variable amounts from large numbers of individual utility customers. A structured DSM Plan must be developed and implemented in a manner that will successfully educate and motivate customers into action on a scale sufficient to produce meaningful amounts of cost effective DSM resources.

NorthWestern presents this plan as its proposed initial commitment to Demand Side Management and increased energy efficiency efforts with its customers. This plan is based on NorthWestern's successful experience in Montana, experience in talking with South Dakota customers about what they seek for energy efficiency services, and best practices in the utility industry. The plan will likely evolve as business conditions change and more DSM program experience is gained.

II. DSM Goals and Objectives

There are two fundamental purposes for NorthWestern's proposed DSM plan:

1) Acquire low-cost energy resources for the benefit of NWE customers, and
2) Help customers better understand ways that energy efficiency can assist them in managing their energy usage and costs.

Following successful implementation of initial DSM programs intended for mass residential and commercial customer markets, NorthWestern will work to complete design and implementation of a comprehensive group of DSM programs that will address the entire natural gas and electric customer base. When the DSM program portfolio is fully implemented, the programs will have broad applicability and should provide opportunities for expanded energy efficiency and savings to almost all customers. NWE will develop the DSM delivery infrastructure (programs, contractors, funding sources, trade ally relationships, etc.) necessary to maintain a steady, sustainable DSM acquisition schedule into the future. DSM program activities will include customer education and multiple program mechanisms that offer customers several energy efficiency choices and additional control over their energy usage and cost.

III. Overview and Background of Demand Side Management

DSM is a term used in the energy industry to describe strategies aimed at proactively influencing the manner in which customers use energy. Basic DSM strategies include persuading customers to use energy more efficiently and/or encouraging customers to shift portions of their energy usage away from peak periods (generally high system usage periods as defined by the utility).

DSM strategies that promote more efficient energy use generally include customer education and financial incentives to persuade customers to adopt energy efficient technologies and/or change energy usage-related behavior. An example of an energy efficient technology is a compact fluorescent light bulb (CFL). Turning down the temperature setting on an electric water heater is an example of a behavioral change. DSM strategies aimed at efficiency improvements may also reduce energy usage during peak periods.

Another category of DSM programs, typically referred to collectively as Demand Response, is aimed at shifting the times of energy use and generally includes education, appropriate rate design and/or financial incentives to encourage the

desired behavior. Such Demand Response DSM programs may contemplate voluntary actions by customers to shift usage (non-dispatchable) or, for customers willing to participate, can include active control of specific customer equipment by the utility (dispatchable).

As proposed, this plan includes DSM techniques to encourage more efficient use of energy through programs that educate customers and provide financial incentives to encourage customers to adopt efficient technologies. Throughout the remainder of this section and the rest of this document where the terms DSM or Demand Side Management are used, the reference is to the more efficient use of energy unless specifically stated otherwise.[1]

DSM will be an important resource for NWE and its customers due to the potential for higher energy costs, thinner reserve margins, higher load growth, increasing utility rate pressures, and increasing environmental concerns. Deployment of cost effective load management and energy efficiency programs will play a role in helping NWE meet future energy supply needs.

IV. Benefits and Risks Associated with DSM

One primary benefit of DSM is that it displaces the need to purchase more expensive energy resources by reducing customer energy usage through efficiency gains. In that sense, DSM is viewed by the industry as a resource option. The average levelized cost of electric DSM is estimated at about $20-25 per MWh, which compares quite favorably with other resource alternatives. Because of this relatively low cost, DSM decreases total energy supply portfolio costs over the long run and, on average, customer bills are lower as a result. DSM provides a tool individual customers can use to reduce their energy bills from what they otherwise would be, absent adoption of efficient technologies. Environmental benefits are another important aspect of DSM.

[1] There is potentially a small amount of cost effective electric DSM associated with switching electric and water space heat to natural gas in the residential sector.

Energy saved through DSM activities reduces the need for electric generation and natural gas supply and the associated emissions and other environmental impacts.

There is a capital cost risk associated with DSM. DSM related costs are incurred up-front to pay for the installation of efficient technologies or DSM measures that are expected to generate savings many years into the future. There is the risk that the expected savings will not materialize. Some reasons the expected savings may not materialize include equipment not performing as specified, incorrect assumptions about the efficiency and operating parameters of the equipment that is replaced, or changes in customer behavior after adoption of energy efficient technologies[2]. Other reasons for why DSM savings may not materialize as expected relates to the removal of DSM measures due to premature equipment failure, changes in equipment/facility use, business closure, or customer dissatisfaction with performance of the DSM measures. DSM programs are generally designed such that program participants pay for a portion of the measures so the capital risk is shared between program participants and the utility. This cost sharing approach reduces NWE's cost of acquiring the DSM resources and helps to increase the likelihood that anticipated savings will materialize since customers have a financial stake in the success of the DSM measures as well. Up to the cost effective limit, NWE is guided by the principle of contributing only as much as is necessary to cause customers to act and install DSM measures. To the extent actual savings is less than anticipated, DSM resource becomes relatively more expensive and thus, cost effectiveness from both the customer and utility perspectives is reduced.

While the capital cost risk associated with DSM is a consideration, it does not necessarily make DSM unattractive or uneconomic. In fact, utilities across the country have a long history of operating cost effective DSM programs while managing the associated capital cost risk. NWE, through its predecessor utility Montana Power Company, operated energy efficiency programs in Montana beginning in the late 1980's that were generally confirmed through rigorous program evaluations as being

[2] An example of a change in behavior that could reduce actual savings from expected is a customer who, after installing more efficient lights, is less conscientious about turning off unneeded light fixtures. This is also known as "take-back".

cost effective. More recently, NWE has operated diverse portfolios of electric and natural gas energy efficiency programs in its Montana service territory. Third party evaluations of these programs for the years 2004-2006 found NWE-MT's portfolios to be cost effective.[3] While DSM related capital cost risk has not gone away, NWE believes it is a risk that can be effectively managed through appropriate program design, regular program evaluations, and ongoing program adjustments and modifications as more information and experience is gained.

V. Growth of DSM at NWE

NWE has taken the initiative to add new energy conservation activities since 2004, including more extensive use of its website to inform and educate its customers. Using a product called "Calc-U-Pal" (located on NorthWestern's website[4]) provides a means for customers to identify opportunities to control and reduce their energy consumption. Another tool for customers on NWE's website is a list of energy savings tips for the highest energy end-uses within a home. There are also tools for commercial and industrial customers. Energy Management Solutions, for example, is a new e-mail service for commercial and industrial customers. It is a free service that provides technical advice, energy operations and maintenance information, business research and information assistance quickly and easily.

In addition to greater use of on-line tools through its website, NorthWestern has sponsored customer appreciation "Open Houses" at its local office sites. During an Open House, free weatherization kits are distributed to customers to help them prepare their homes for the heating season. The weatherization kits contain items such as window wrapping, door sweeps, spray foam insulation, CFL's, foam gasket inserts for electric outlets, or other easy to install items aimed at increasing the energy efficiency of a home. Tabletop displays and videos with information on energy efficiency are also located at local offices for customers to review during Open

[3] A comprehensive evaluation by an independent third party of NorthWestern's DSM programs operated during the period 2007-2011 is in progress now and coming to a conclusion in November 2012.

[4] http://c03.apogee.net/clients/default.aspx?hostheader=northwestern&utilityid=northwestern

Houses. These events have proven quite popular and provide an excellent opportunity for positive "one on one" interaction between NWE and its customers.

NorthWestern has also used its customer newsletters and bill inserts as another method for distributing information to its customers concerning energy efficiency, preparing their homes for winter, or understanding and using budget billing. NWE attends county fairs, home shows, state fairs, and other community events regularly as an opportunity to distribute energy efficiency to information to customers.

VI. DSM Cost Effectiveness

In 2003, NWE contracted with KEMA, Inc. to perform an assessment of the electric DSM potential in its Montana service territory. The assessment work was updated in 2005, and the research was repeated and expanded in 2009 using a different contractor, NEXANT, Inc. This study began with a comprehensive starting list of possible DSM measures, which were then analyzed for cost-effectiveness. KEMA's review of the initial DSM prospects resulted in a list of DSM measures that were deemed suitable for Montana electric DSM programs. A Total Resource Cost Test (TRC) was employed to screen individual DSM measures for cost effectiveness. The TRC is a ratio of benefits to costs. TRC benefits are avoidable costs, which for this assessment equal the present value of the estimated electric or natural gas savings provided by the DSM measure multiplied by NWE's estimated avoidable electric or natural gas supply costs (avoided costs) over a 20-year period. TRC costs are the present value of the estimated incremental cost of installing the DSM measure plus any future costs associated with maintaining the measure to provide the savings through the 20-year period. TRC costs include both utility costs and customer costs.

Separately but similarly, NWE conducted an analysis of natural gas DSM measures for its Montana market, screening them for cost effectiveness using natural gas avoided costs, best available installation cost information, and application of the TRC. As with the electric DSM assessment work, a list of qualifying measures resulted from this analysis.

Building on work done for the Montana portion of NWE's system, service territory and customer base, NWE applied South Dakota-specific electric and natural gas avoided costs to DSM measures considered for initial programs in South Dakota. Additionally, updated information on costs for materials and installation of many DSM measures was included in the calculations for South Dakota.[5] The TRC test using these measure costs and South Dakota's electric and natural gas avoided costs was used to select the cost-effective measures for inclusion in this proposal for DSM programs.

A. Environmental Benefit Factor: It is generally accepted that DSM mitigates environmental impacts associated with emissions that would have resulted from the typical supply side resources it displaces. It is, however, extremely difficult to accurately quantify. An environmental benefit factor is used in the TRC-based screening and decision rule for eligible DSM measures to recognize that such emissions may have societal costs beyond those internalized in the price of the energy produced by the displaced resources.

Discussions with other interested parties[6] produced an agreement that some recognition of environmental externalities is needed in TRC calculations, but no certainty on precisely how such quantification should be done. Therefore, NWE did not attempt to explicitly quantify the appropriate environmental benefit factor for use in this DSM assessment. Rather a 10% environmental benefit factor was chosen as a reasonable surrogate.[7] This 10% factor has not been challenged

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[5] Costs for DSM measures are gathered from many sources, including national and regional databases, other utility DSM programs, and substantial field experience with Montana DSM programs. Additionally, a comprehensive DSM program evaluation completed in 2007 by NEXANT, Inc. verified the costs for materials and labor used in TRC calculations. NWE believes these costs are relevant and reasonably appropriate for the South Dakota region. Future program evaluations of the South Dakota DSM effort will necessarily revisit these cost assumptions.

[6] Discussions included staff of The Montana Public Service Commission, the Montana Electric Technical Advisory Group, and of the Northwest Power and Conservation Council.

[7] Previous to the adoption of the Electric Default Supplier Procurement Guidelines in Montana, electric supply planning was conducted under sections 38.5.2001ARM through 38.5.20016 ARM dated 12/31/92. In accordance with section 38.5.2003, ARM, "Environmental Externalities" NWE (formerly MPC) had previously estimated the external environmental costs associated with gas-fired combined cycle generation at 5% of avoided costs. Additionally, section

since its initial use, and is considered to be adequate recognition of environmental externalities.

B. The Cost Effectiveness Decision Rule: Absent additional considerations, a DSM measure is deemed cost effective when the TRC (the ratio of benefits to costs) as described above is equal to 1.0 or greater. However, when a 10% environmental benefit factor is applied, a measure is considered cost effective when its cost is equal to or less than 110% of the avoided cost value, or the benefits, of the associated electric savings. This is a cost/benefit ratio. As discussed previously, the TRC is a benefit/cost ratio or the reciprocal of the cost/benefit ratio. Consequently, in this analysis, The Cost Effectiveness Decision Rule establishes that all measures with a TRC equal to 0.9 or greater are considered cost effective for purposes of screening the DSM measures for inclusion in NWE DSM programs.

   The impact of using a 10% environmental benefit factor is that more measures are considered cost effective than if the 10% is not applied, which results in an increase in DSM potential.

C. Cost Effective Measures: the measures that were determined to be cost effective for residential and commercial/industrial customers respectively, and will be included in the initial set of DSM programs are provided in Section XI DSM Program Descriptions, and also are listed in Appendix A.

38.5.2011, ARM, "Regulatory and Market Barriers to Integrated Least Cost Planning and Acquisition of Demand-Side Resources, specified that DSM resources be considered cost effective up to 115% of the utility's avoided costs. In essence, DSM was afforded a 20% cost advantage. It is possible that government regulations have since caused generation projects to internalize environmental costs to a great extent, which would be reflected in market prices. If so, the environmental benefit factor could be zero or close to it. However, as discussed above, NWE chooses to give DSM the benefit of the doubt in using 10%.

VII.DSM Annual Targets

Developing a portfolio of DSM programs typically includes establishment of annual targets or goals for specific levels of acquired DSM. At this time, and given the desire of NWE to expand its DSM program offerings immediately, establishment of specific annual electric and natural gas DSM targets is speculative. NWE proposes to go forward with specific DSM programs based on cost effective measures and estimated funding levels for the first two years. An initial ramp-up period is expected to allow the expanded DSM program portfolio to become fully operational and the customer base to become better informed about the program features and availability. Following two years of activity, these initial programs should be fully implemented and functioning well, and NWE will have gained knowledge of the potential annual amounts of DSM the portfolio of programs can deliver. At that time, NWE can set better-informed annual targets.

The quantity of achievable and cost effective DSM available is finite. Because of that, the number of opportunities available to acquire DSM in terms of both customers and measures decreases over time. Customers that are relatively more inclined to adopt energy efficient technologies, for whatever reason, will likely participate in the earlier years of the DSM plan. Relatively more of the DSM opportunities remaining will reside in facilities whose owners are less inclined to adopt energy efficient technologies for any number of reasons. Such reasons may include measures that, while cost effective, are relatively costly as compared to the billing savings they generate, high investment hurdle rates, distrust of new technology, lack of knowledge of the availability and benefits of energy efficient technologies, and/or simply an indifferent attitude. Thus, more focused promotional efforts and/or relatively higher average incentives will likely be required to achieve the targets in later years of the DSM plan.

VIII. DSM Acquisition

DSM will be acquired through programs incorporating measures identified as passing the Cost Effectiveness Decision Rule (TRC = 0.9 or greater) as well as any measures subsequently determined by NWE to be cost effective based on further analysis. The

program mix will be designed to target all customer sectors. Programs will be designed to minimize cream skimming.[8]

IX. DSM Program Development and Delivery

The DSM development and delivery infrastructure will consist of a team of NWE personnel (NWE DSM Team) and outside contractors.

The NWE DSM Team has two components with primary responsibilities as described below:

A. Administration is responsible for developing, pre-packaging, and managing programs. Related duties include designing programs, issuing requests for proposals, contracting for services and administering such contract(s), developing standardized promotional materials for use in the field and for general program promotion, establishing and tracking overall program budgets, developing DSM goals by area, consolidating/reporting results, and supporting DSM tracker filings.

B. Local NorthWestern personnel are responsible for providing input for program development and for program outreach at the local level including promoting DSM programs to customers and civic groups, coordinating promotion efforts with the outside contractor(s), and monitoring performance of contractors at the local level. These NorthWestern employees will provide for "on-the-ground" representation of NWE's DSM efforts.

Outside contractors are responsible for program implementation to achieve overall and local DSM targets, including procurement and installation of all DSM measures, coordinating program outreach activities with both the administration and field components of NWE DSM team, and reporting program activities/results. Work placed with outside contractors will generally be competitively bid except where it is

[8] Cream skimming is a term used to describe the undesirable practice of acquiring the least expensive DSM without acquiring more expensive, but cost effective, DSM at the same time. Added costs associated with having to "return" to acquire the more expensive DSM can render such DSM non-cost effective or "stranded".

clear and demonstrable that sole sourcing is prudent and in the best interests of customers. Sole sourcing may be preferential to bidding in instances where existing services provided by outside contractors in Montana programs provide cost efficient delivery infrastructure and quick program expansion capability in South Dakota.

X. Program Evaluations

The DSM savings and costs associated with this DSM plan are based on the DSM assessment, program experience and comprehensive DSM program evaluation in Montana, and analysis specific to South Dakota. Going forward, it is important to conduct evaluations of DSM programs on a regular basis to identify needs for program related changes, verify program savings, and evaluate program cost effectiveness. There are three core tasks involved in a comprehensive DSM program evaluation; process, impact, and economic evaluation.

Process evaluations focus mainly on DSM program delivery issues. Examples of questions that process evaluations attempt to answer are:

- Is the program targeted at the correct customer segment(s)?
- Is program promotion reaching the targeted customer segment(s)?
- Are incentive levels and promotion budgets and activities appropriate for the desired program results?
- Does the potential associated with the program match planned future targets for the program?
- What are customer attitudes about the program?
- Are there areas where the program can be improved and/or made more efficient?

Impact evaluations focus mainly on DSM program results with respect to DSM acquisition. Some of the questions impact evaluations seek to answer include:

- What are the actual savings achieved by the program/technology?

- Do program savings persist over time?
- Is the program cost effective?

Economic evaluation is intended to determine whether the overall DSM program effort, and the respective individual DSM programs and DSM measures within each, are cost-effective. Also, the economic evaluation will produce the levelized cost of DSM resource acquisition by individual program and for the overall portfolio of programs.

NWE intends to commence program evaluation activities no later than the first half of year 4 of DSM program operation. A Request for Proposal will be issued and a blind, competitive bidding process will be used to select a qualified DSM Program Evaluation Contractor. Evaluations will occur on a regular basis thereafter as needed. In order to eliminate potential conflict of interest issues, evaluations will be administered primarily by outside contractors not engaged in other aspects of DSM program implementation and delivery.

A general description of the type of work that the selected independent DSM Program Evaluation Contractor will be required to perform is included in Appendix B.

XI. DSM Program Descriptions

NWE proposes to initiate several programs that are well developed in Montana and can be rolled out quickly in South Dakota. NWE intends to use an outside services contractor with experience in these programs. When the initial programs are fully operational, additional programs will be added.

Effort in the beginning will focus on building the capability to deliver DSM programs and services in the South Dakota service territory. This DSM infrastructure development involves acquiring and training people, establishing and building relationships with market participants like retailers, wholesalers, builders, trade groups, engineering/architectural firms, government officials, operators and decision-makers of commercial and public buildings and facilities.

The DSM Program Portfolio will be organized into the five general programs listed below. Qualifying energy efficiency measures for the rebate programs (non-energy audit programs) are shown, with additional details on each qualifying measure presented in Appendix A:

A. Residential In-home Energy Audit Program

This program is proposed as a foundational energy conservation program that will be available to all qualifying customers at no direct charge. Residential customers in single-family dwellings whose space and/or water heating fuels are delivered by NWE and whose home is at least five years old are eligible for an on-site energy audit. Homeowners and renters will qualify. On-site audits are conducted to survey energy use, to install certain energy saving measures, and to identify energy saving opportunities.

This service will include the following activities:

1. A dedicated toll-free number for customers to use to request or schedule an audit
2. Providing customers with a day-ahead reminder call and/or a reminder postcard
3. A customer-specific report home audit report that will be sent to the customer within 12 business days of the appointment
4. In-home audits include (as applicable):
   a. Installing weatherization materials where appropriate:
      1) Water heater insulation blanket
      2) Pipe insulation (up to 10 feet on the hot water line)
      3) Compact fluorescent lamps
      4) Water and energy saving showerheads; kitchen and bath faucet aerators
   b. Providing and educating customer on the benefits of weatherization materials:
   c. A weatherization kit which includes:
      1) Door sweep
      2) Door weather-strip
      3) Switch/outlet covers and air-sealing foam
   d. Supplying education, services, and measures where appropriate:

1) Air tightness analysis on the home (blower door test)
2) Computer analysis of energy usage in the home, which includes energy-saving recommendations and payback information
3) Water heater safety check including carbon monoxide test for homes using NWE natural gas
4) Insulation and ventilation inspection
5) Door and window inspection

A customized report with energy saving recommendations is generated for the customer for both on-site and mail-in audits. Although homes cannot be re-audited, a customer can request a copy of a previous audit report.

B. **Residential Existing Construction Program (Electric and Natural Gas)**: This program may include REBATES for the following measures:

Compact Fluorescent Lamp (CFL)
Compact Fluorescent Lamp (CFL) Fixture
ENERGY STAR Dehumidifiers
ENERGY STAR DVD System
ENERGY STAR Office Computer
ENERGY STAR Refrigerator/Freezer
ENERGY STAR Energy Star TV
Thermostat - Clock/Programmable
Insulation (Rim And Band Joist)
Insulation (Ceiling/Attic)
Attic/Ceiling R-0 to R-49 Insulation
Crawlspace R-0 to R-19 Insulation
High Efficiency Condensing Boiler
High Efficiency Condensing Furnace
High Efficiency Gas Room Heater
High Efficiency Water Heater
Programmable Thermostat
In-Home Energy Audit

C. **Residential New Construction Program (Electric and Natural Gas)**: This program includes REBATES to natural gas space and water heat customers for the following measures:

Compact Fluorescent Lamp (CFL)

Compact Fluorescent Lamp Fixture
ENERGY STAR Energy Star Dehumidifiers
ENERGY STAR Energy Star DVD System
ENERGY STAR Energy Star Office Computer
ENERGY STAR Refrigerator/Freezer
ENERGY STAR TV
Thermostat - Clock/Programmable
High Efficiency Condensing Boiler
High Efficiency Condensing Furnace

D. Commercial Existing Construction Program (Electric and Natural Gas): This program includes REBATES to natural gas space and water heat customers for the following measures:

One or Two Lamp Fixture 1/1, 2/1 (lamp/ballast)
Three Lamp Fixture 3/1, 3/2 (lamp/ballast)
Four Lamp Fixture 4/1, 4/2 (lamp/ballast)
T-8 lamp 4 foot
T-8 lamp 8 foot
T-8 High Output (HO) lamp 8 foot
Mercury Vapor (MV), High Pressure Sodium Vapor (HPSV) or Metal Halide (MH) to HO or T-8
Other Approved Lighting Retrofits
Compact Fluorescent Lamp (CFL)

- Integral (screw-in) or Modular
- Hard-Wired CFL Fixture

LED Solid State White Lighting for Exterior Landscape, Signage & Structure Only
LED Face Exit Sign
Photocell
Time Clock Controls
Occupancy Sensor or Sweep Control
Day lighting Controls - Dimming-Continuous, Fluorescent Fixtures Continuous Dimming, Fluorescent Fixtures (Day-Lighting)
ENERGY STAR - Computer
ENERGY STAR - Copiers
ENERGY STAR - Fax
ENERGY STAR - Printers
ENERGY STAR - Scanners
ENERGY STAR - Water Cooler
ENERGY STAR Server
Motor - Fan System - Variable Speed Control
Residential-Size Refrigerator
Server (Early Retirement)

Server Virtualization (4:1)
High Efficiency Furnace/Boiler ≥ 90% AFUE or ≥ 90% Thermal Efficiency (TE)
High Efficiency Windows (Multiple Glazed, Low Emissivity, U ≤ 0.35)
High Efficiency Water Heater EF ≥ 0.62 or ≥ 90% TE
Ceiling Insulation R ≥ 38
Exterior Wall Insulation (above grade, R ≥ 21)

E. **Commercial New Construction Program (Electric and Natural Gas)**: This program includes REBATES to natural gas space and water heat customers for the following measures:

Compact Fluorescent Lamp (CFL)
MV, HPSV or MH to T-5 HO or T-8
Energy Star - Computer
Energy Star - Copiers
Energy Star - Fax
Energy Star - Printers
Energy Star - Scanners
Energy Star - Water Cooler
Energy Star Server
Motor - Fan System - Variable Speed Control
Residential-Size Refrigerator
High Efficiency (Power Burner/ Premium) Furnace/Boiler (AFUE ≥90% or 90% TE
High Efficiency Water Heater (EF ≥ 0.62 or ≥90% TE)

DSM Program Rebates

A. Residential Rebates and Incentives

In general, participating customers can claim rebates for eligible DSM Program measures by completing a Rebate Application Form (available in NorthWestern offices or from the NorthWestern Energy web site) and mailing the form along with proof-of-purchase documentation to NorthWestern's DSM Program contractor.

In addition to rebates for various types of equipment, the program promotes energy efficient lighting projects by providing prescriptive rebates to encourage residential customers to switch from incandescent bulbs to more efficient

ENERGY STAR compact fluorescent lamps (CFLs) in their homes. All NWE electric residential customers will be eligible to participate. The program employs the following delivery approaches to encourage customers to install ENERGY STAR CFLs:

1. *In-Store*: Coupons worth $1.50 per CFL toward the purchase of up to ten CFLs at participating retailers are mailed to customers. Each coupon has a unique bar code that indicates which coupons are used. Customers are limited to one coupon per promotion; promotions occur twice annually.

2. *Mail-In:* Rebates for a minimum of five and a maximum of 15 CFLs, limited in amount to the lesser of $1.50 per bulb or the bulb's purchase price, and rebates of $5.00 per fixture for ENERGY STAR lighting fixtures (fixtures with electronic ballasts, although outdoor ENERGY STAR fixtures with magnetic ballasts are also acceptable).

3. *Direct Install:* In conjunction with the E+ Energy Audit for the Home Program, CFLs are directly installed at on-site audit locations in all fixtures identified by the homeowner as operating on average at least three hours per day.

B. Commercial Rebates and Incentives

As with residential rebates, participating commercial customers can claim rebates for eligible DSM Program measures by completing a Rebate Application Form (available in NorthWestern offices or from the NorthWestern Energy web site) and mailing the form along with proof-of-purchase documentation to NorthWestern's DSM Program contractor.

The Commercial DSM Programs target NorthWestern's commercial, industrial, and institutional customers in South Dakota. In addition to rebates for various types of equipment, the program promotes energy efficient lighting projects by providing prescriptive rebates for customers who replace lighting equipment with more efficient technologies or who install lighting controls. Equipment must operate a minimum of 1,000 hours per year to qualify, and projects must qualify for at least a $50 rebate to be eligible.

Projects will be given a window of time in which they must be completed to ensure project funds are assigned only to projects that are actively underway. In addition, rebates will not be provided for lamps or fixtures placed in stock in excess of 5% of installed equipment.

Program marketing includes outreach to and cultivation of working relationships with area retailers and trade allies. A contract commercial lighting specialist will be employed to promote the program, interact with trade allies, provide technical assistance to participants, and perform pre- and post-installation inspections.

Appendix A provides additional detail on eligible DSM program measures, qualification criteria, and the rebate/incentive structure for all DSM programs.

XII. DSM Program Marketing and Communications Plan

The South Dakota DSM Communications Plan is intended as a guide to identify and direct the communications strategies associated with the implementation of NorthWestern Energy's DSM programs in South Dakota. The plan will be modified as needed to suit changing opportunities and conditions.

Goals, Objectives and Audiences

NorthWestern's communications and marketing goal is to effectively and efficiently introduce DSM programs to NWE's South Dakota natural gas and electric customers through NorthWestern Energy employees and its program contractors, and by generating increased public awareness of the programs and the opportunity to save energy.

Specific DSM marketing and communications objectives are to engage trade allies in our communities and public entities to incorporate energy efficiency in their messages

and marketing, and also to engage customers to demand energy efficiency from service providers.

Audiences that will be targeted by NorthWestern's marketing and communications activities include:

- NorthWestern Energy employees
- NorthWestern Energy program contractors and partner contractors
- Residential customers (natural gas and electric)
- Commercial and Industrial Customers (natural gas and electric)
- Trade Allies:
    - Electrical vendors—i.e. Grainger, WesCo, CED;
    - Service providers—electricians, refrigeration, HVAC, motors, architects, engineers, insulation;
    - Distributors—lighting, equipment;
    - Retailers—of CFLs, building supplies, appliances, air sealing, and water measures; building contractors and general contractors;
    - HVAC and insulation contractors; and
    - Trade associations—i.e. AIA, ASHRAE, Hospital Association and Hospitality and Lodging Association.
- Public officials and government departments
- Media—mass and trades

Implementation Strategies

NorthWestern Energy will engage its employees, program implementation representatives, and program/partner contractors to utilize existing and new methods and tools to cultivate customer participation in the DSM programs.

Implementation tactics are targeted by customer sector and directed at defined audiences in most cases. Cross-marketing of programs within the customer sector is incorporated as appropriate.

Programs will be offered under the Efficiency Plus (E+) umbrella and mirror best practice strategies that have been successfully implemented with Montana customers. Modification to communications and program design to fit the South Dakota market will be incorporated.

Tactics

Residential Programs will be promoted using the following techniques and mechanisms:

- Target direct mail and limited media for E+ Audits for the Home with cross marketing of Energy Appraisal
- CFL instant coupon offerings to increase installation of CFLs, incorporating the educational messages (4L's) into various residential lighting messages for lighting activities
- Develop program materials/resources (Web and Brochures)
- Develop contacts by program contractors/local NWE employees
- Provide training on DSM programs for Customer Service Representatives (CSRs)
- Messages in Energy Connections and news releases regarding saving energy and the introduction of E+ programs in SD.
- Participate in local events as appropriate
- Contact trade allies and solicit their participation in promotion of E+ Programs with their customers/members (Preferred Contractors, lighting retailers, homebuilding associations)

Commercial and industrial DSM Programs will be promoted using the following techniques and mechanisms:

- Develop materials to support the outreach for E+ Commercial Lighting rebates
- Integrate commercial program messages into tradeshow displays

- Initiate customer and trade ally contacts by program/partner contractors and CSRs
- Participate in local events where appropriate
- Targeted outreach for customer/trade ally training and partnership opportunities
- Develop trade ally databases
- Develop program-at-a-glance summary
- Populate the SD E+ web resources with program information

Methods and Tools

Residential Sector

- **Program brochures** that describe individual programs and cross-market same sector programs and highlight resources for more information directing customers to website or program contact phone numbers. Targeted to general audiences.

- **Web/interactive Media** tools that include the Efficiency Plus (E+) web section of www.northwesternenergy.com, Facebook, and Search Engine Marketing (SEM) as appropriate. Targeted to general audiences.

- **Internal Communications** throughout the year such as FYI, TEAM, iConnect, emails, employee training sessions, etc. to introduce SD program offerings and inform all or targeted groups of employees of programs, featured projects/promotions, training, and events. Targeted to NorthWestern employees.

- **Billing Messages** in the message box of the NorthWestern Energy billing statement and in Energy Connections to encourage program participation. Targeted to residential customers.

- **Direct Mail to Trade Allies** and targeted customers of individual program offering and related trainings along with cross-marketing of other programs. Targeted for individual mailing.

- **One-on-One Contact** by program representatives, program contractors, CSRs – communicate residential program offerings based upon opportunity and direct to appropriate resources. May include interactions during: E+ Audit for the Home, tradeshow discussions, customer care calls, or normal company interactions with the customer. Opportunity driven.

- **One-to-Many Contact** through speakers' bureau, service organization presentations by program contractors and employees as appropriate to increase awareness of programs and opportunities to save energy. Company or customer initiated.

- **Trade and Home Improvement Shows** and other community events to reach targeted audiences with information about programs and opportunities. Company or organization initiated.

- **Trade Association Events, Publications, and Websites** to target presentations, displays and messages about opportunities for customers to save energy and the programs that NorthWestern Energy offers. Targeted to trade allies and customer groups.

- **Targeted Media Advertising** tied to special campaigns, programs or events. Targeted to eligible residential audiences.

- **Earned Media Feature Stories** on projects and opportunities in trade or mass media. Targeted to general audiences.

Commercial/Industrial Sector

- **Brochures** that describe program offerings and highlight resources for more information directing customers to website or program contact phone numbers. Initial offering will focus on the E+ Commercial Lighting Rebates. Targeted to general audiences.

- **Web/interactive Media Tools:** use of the Efficiency Plus (E+) web section of www.northwesternenergy.com and SEM as appropriate. Targeted to general audiences.

- **Internal Communications** throughout the year such as FYI, TEAM, I-Connect, e-mails, CSR trainings, etc. to inform all or targeted employees groups about programs, featured projects/promotions, training, and events. Targeted to employees and program partners as appropriate.

- **Case Studies** of customer projects as they become available to demonstrate various types of customer participation and customer benefits. Targeted to trade allies and key contacts and certain customers/customer sector subsets.

- **Billing Messages** in the message box of NorthWestern Energy billing statements and in Energy Connections to encourage program participation. Targeted to all commercial and industrial customers.

- **Direct Mail** to trade allies and targeted customers regarding individual program offering and related trainings along with cross-marketing of other programs. Targeted to individual customer mailings.

- **Customer Care E-Newsletter** to key customers will include information about programs, training, and case studies throughout the year.

- **One-on-one Contact** by program representatives, program contractors, employees – communicate commercial and industrial program offerings based upon opportunity and direct to appropriate resources. May include interactions during informal facility assessment, project completion review, cold calls, trade ally visits, or normal company interactions with the customer. This activity is opportunity driven.

- **One-to-Many Contact** through speakers' bureau, service organization presentations by program contractors and employees to increase awareness of programs and opportunities to save energy. This activity is either company or customer initiated.

- **Trade Association Events, Publications, and Websites** for making presentations, setting up displays and delivering messages about opportunities for customers to save energy and programs offered by NorthWestern Energy. Targeted to specific trade allies or customer groups as appropriate.

- **Targeted Media Advertising** tied to events, projects, or programs. E+ Commercial Lighting Rebate program advertising through television and radio to promote lighting as a universal way for businesses to save energy. Targeted to general audiences with an emphasis on commercial lighting or other specific project-related audiences.

- **Earned Media Feature Stories** on projects and opportunities in trade or mass media. Targeted to general audiences with an emphasis on commercial lighting or other specific project-related audiences.

- **Supporting Commercial Program Contractors** with consistent marketing materials to describe working relationship with NorthWestern Energy.

NorthWestern Energy has defined an overall budget for marketing and communication for the electric and natural gas DSM programs as presented in Table 1 below. This includes mass media development and placement as well as all other marketing expenses.

Table 1: NorthWestern DSM Program Advertising Budget

	Year 1	Year 2	Total
Advertising			
Newspaper—1 campaign 1 inserts ea. ¼ page =$4,100	$20,500	20,500	**$41,000**
Direct Mail—1 campaign with 58,000@ $ .35 ea + 40% of Prod. =$22,700	$90,400	$90,400	**$180,800**
Billboard 1 campaign with 10 signs@ for 3 months =19,750	$19,750	$19,750	**$39,500**
Radio 1 campaign =$7,000	$7,000	$7,000	**$14,000**
Television 1 campaign =$18,500	$74,000	$74,000	**$148,000**
Trade shows/association events $1,500 for booth, promo, preferably with speaker commitments	$9,000	$10,500	**$19,500**
Advertising total	$220,650	$222,150	**$442,800**

XIII. Future Programs

Following successful introduction of the programs described above NWE will examine whether the following additional programs are appropriate and cost effective additions for an expanded DSM portfolio.

A. E+ Business Partners Program

This program would serve all NWE commercial and industrial electric customers. NWE would solicit proposals for projects that incorporate conservation and renewable energy sources or that provide a unique benefit to NWE's distribution system. Project proposals would have to demonstrate the cost effectiveness of the project, prove the availability of qualified design services, contractors, and maintenance service, and describe the projects' use of reliable and available equipment.

B. Demand Response/Load Control

Through the capabilities available from advanced metering and communications, NWE could offer special time-varying rates and/or would have the ability to remotely manage customer demand in response to supply conditions.

XIV. DSM Program Budget and Schedule

To the extent practical all programs should be offered to NWE electric and natural gas customers on a consistent basis, in order to maximize program effectiveness, minimize customer confusion, and minimize administration cost and effort.

NWE DSM funds should be used only to acquire DSM from NWE customers, not customers served by other utilities or non-utility energy suppliers. DSM funds should fund programs for all NWE customers as allowed by DSM budgets.

A. Budget

NorthWestern is introducing a group of new DSM programs into its South Dakota service area. Without historical DSM program participation data to use, it is difficult to estimate the level of rebates and incentives that will be claimed by participating customers. NorthWestern has received a bid for certain services from KEMA, one of its DSM Program implementation contractors in Montana. This bid includes estimates to establish a presence in South Dakota, recruit and train staff and field personnel, and put various computer, software, data collection, and administrative systems into place.

The expected budget for all DSM programs to be introduced in 2013 is summarized in Table 2.

Table 2: NorthWestern Energy 2-year DSM Program Budget

NorthWestern South Dakota DSM Program Budget Estimates

	2013	2014	2-Year Total
Contractor Expenses (KEMA)			
Residential Audit Program			
Program Startup (contractor cost):			
Two vehicles (at cost)	$ 64,000	$ -	$ 64,000
RECAP & Database Development (T&M)	$ 50,000	$ -	$ 50,000
In-home audits	$459,914	$427,680	$ 887,594
Program Subtotal	$ 573,914	$ 427,680	$ 1,001,594
Residential/Commercial Electric & Natural Gas Rebate Programs			
Program Startup (contractor cost)	$ 20,583	$ 20,583	$ 41,166
Outside Services:	$ 246,800	$ 200,450	$ 447,250
Program Subtotal	$ 267,383	$ 221,033	$ 488,416
Contractor Expenses (KEMA) Total	$ 841,297	$ 648,713	$ 1,490,010
NorthWestern Energy Expenses:			
Rebates	$ 900,000	$ 900,000	$ 1,800,000
Admin/non-labor (Travel, office supplies, etc.)	$ 12,000	$ 8,000	$ 20,000
Advertising			
Newspaper	$ 20,500	$ 20,500	$ 41,000
Direct Mail	$ 90,400	$ 90,400	$ 180,800
Billboard	$ 19,750	$ 19,750	$ 39,500
Radio	$ 7,000	$ 7,000	$ 14,000
Television	$ 74,000	$ 74,000	$ 148,000
Trade Show /Association Events	$ 9,000	$ 10,500	$ 19,500
Advertising Subtotal	$ 220,650	$ 222,150	$ 442,800
NorthWestern Energy Expenses Total	$ 1,132,650	$ 1,130,150	$ 2,262,800
Total Estimated Budget	**$ 1,973,947**	**$ 1,778,863**	**$ 3,752,810**

B. Schedule

NWE intends to proceed along the following schedule:

1. As part of the Commission's review of this DSM plan, NWE expects to receive critical review and feedback from the Commission specific to its DSM plan and its proposed DSM Program Cost Tracking and Lost Margin Recovery Mechanism.

2. The NWE DSM team is formed and will commence planning activities including developing overall DSM program strategies, developing definitions of responsibilities for the NWE DSM team and outside contractors, identifying preferred program delivery alternatives, and developing competitive solicitations.

3. NWE will undertake additional activities including, program implementation and delivery once the planning work is complete and upon receiving; (1) a strong indication from the Commission that NWE's DSM plan is reasonable and (2) approval from the Commission of an acceptable mechanism for recovering prudently incurred DSM program costs and associated lost margin. NWE proposes such a mechanism in the next section.

XV. Recovery of DSM Costs and Lost Margin

There are two general categories of costs associated with DSM activities; DSM Program costs and Lost Margin. Full recovery of both categories of costs is necessary to align interests and incentives of both NWE and its customers with respect to utility-sponsored DSM.

XVI. Proposed DSM Cost Tracking and Lost Margin Recovery

NWE believes that DSM program costs and Lost Margin should be expensed and recovered through a tracker mechanism. Accordingly, NWE describes its proposed DSM Program Cost Tracking and Lost Margin Recovery Mechanism in the following sections.

A separate DSM Electric/Natural Gas Tracker (DSM Tracker) will be implemented on a 12 calendar month cycle each year, with annual rate adjustments as necessary and appropriate. A brief description of the mechanics and anticipated timing is provided below.

Lost Margin will be calculated as a percentage of DSM Program Costs. NorthWestern proposes a straight forward percentage adder to each year's DSM Program costs to compensate it for Lost Margin. The Lost Margin Percentage is as follows:

- Electric Lost Margin Percentage = 30.0%
- Natural Gas Lost Margin Percentage = 7.79%

These percentages, for both electric DSM Program costs and natural gas DSM Program costs, will be applied to the forecasted DSM Program spending for each forthcoming year, and will be included as part of the overall DSM Expenses used to calculate rates to recover the cost of the DSM Program effort.

Example #1 using hypothetical electric DSM Program cost:

Year 1 estimated (forecasted) electric DSM Program cost	= $1,000,000
Plus Year 1 electric Lost Margin adder (@ 30%)	= $ 300,000
Total Year 1 (to tracker)	= $1,300,000

Example #2 using proposed DSM budget amounts in this DSM Plan:

The estimated Year 1 total DSM program budget must first be split into electric and natural gas budgets using an estimated percentage split. Because this Plan represents an introductory step into NorthWestern's South Dakota service territory and there is no history from which to make an estimate of this split, NorthWestern proposes a 50/50 split of the Year 1 budget for purposes of calculating the Lost Margin amounts:

- Electric DSM budget: $1,973,947 x 0.50 = $ 986,973
- Natural Gas DSM budget: $1,973,947 x 0.50 = $ 986,973

$1,973,947

	YEAR 1 PROGRAM BUDGET	LOST MARGIN		TOTAL
		Electric @ 30.0 %	Natural Gas @ 7.79%	
Electric DSM	$ 986,973	$ 296,092	--	$1,283,065
Natural Gas DSM	$ 986,973	--	$ 76,885	$1,063,858
Total	$1,973,947	$ 296,092	$ 76,885	$2,346,923

[Note: figures may not total precisely due to rounding.]

A forecast of DSM Program Costs and Lost Margin will be developed for each calendar year (January through December). Any over/under collection for the first year (including interest), plus forecasted DSM Program Costs and Lost Margin for the second year are added together to compute rates for the second year.

Adjustments Resulting from Program Evaluations

NWE intends to report DSM related energy and demand savings based on engineering estimates. Practice has proven that engineering estimates tend to differ from actual savings (many times actual savings are somewhat lower). To account for this difference in the DSM Tracker, NWE proposes to utilize the results of future program evaluations to develop appropriate savings adjustment factors (adjustment factors) that can be applied to engineering estimates to better reflect actual savings and therefore, actual lost revenues. As discussed previously, NWE plans to commission initial program evaluations in year 4 and will conduct subsequent evaluations as necessary. The evaluations will be conducted by independent outside

contractors not engaged in other aspects of DSM program implementation and delivery. The adjustment factors developed from a specific evaluation will be used for calculating lost revenues on a going forward basis until/unless subsequent evaluations suggest the factors should be changed.

NWE will not have the benefit of the results of program evaluations in the first few years of implementation. NWE will use the adjustment factors from the Montana DSM Program Evaluation recently completed by NEXANT for calculation of lost revenues until such time as the first evaluation specific to this expanded portfolio of South Dakota DSM programs is completed.

True-up of the DSM Program Costs and Lost Margin Account

NWE is proposing to begin work necessary to implement and offer its initial energy efficiency programs upon approval of this DSM Plan by the South Dakota PUC. Because it will be necessary to ramp-up DSM Program activities during the initial year, NWE expects that the first plan period will be a shortened period ending on December 31, 2013 and the following plan periods be based on calendar years ending December 31.

NWE believes that customers will find value in continuing energy efficiency programs in South Dakota and that energy efficiency programs will continue for many more years. However, in the event that energy efficiency programs do not continue into the future, NWE proposes to continue to collect any unrecovered energy efficiency costs, lost margin and reconciliation amounts through the cost recovery mechanisms described in this Plan until all such costs are recovered. Likewise, NWE would return any over-collections to customers through the cost recovery factor until all over-collections are returned.

XVII. Conclusion

NWE has described its intentions with regard to implementation of this proposed DSM plan. Further, NWE has proposed a mechanism for recovery of DSM Program

Costs and Lost Margin that will identify well with the existing electric and natural gas trackers. NWE has stated its intent to form a DSM team beginning in 2012 and commence program planning and development activities upon final approval of its Plan.

Appendix A

2012-2013 South Dakota Commercial Existing Construction Progam (Electric and Natural Gas)

Commercial Existing Construction Electric and Natural Gas Rebate Measures

	Measures	Minimum Requirements	Rebate ($/unit)	Units	Qualifiers
1	One or Two Lamp Fixture 3/1, 2/1 (lamp/ballast)		$ 8.00	per fixture	Fully Electronic Ballast
2	Three Lamp Fixture 3/1, 3/2 (lamp/ballast)**		$ 10.00	per fixture	Fully Electronic Ballast; **Tandem wired fixture using one ballast for two fixtures count as one fixture.
3	Four Lamp Fixture 4/1, 4/2 (lamp/ballast)		$ 12.00	per fixture	Fully Electronic Ballast
					[1] An additional $ 0.10/Watt saved compared to a standard 32 Watt T-8 lamp will be applied for low-Wattage T-8 lamps. Low-Wattage T-8 lamps typically produce lower lumen levels compared to standard T-8 lamps.
4	T-8 lamp 4 foot		$ 1.00	per lamp[1]	
5	T-8 lamp 8 foot		$ 2.00	per lamp	
6	T-8 HO lamp 8 foot		$ 6.00	per lamp	
7	MV, HPSV or MH to T-5 HO or T-8		$ 0.50	per Watt saved	****On Approved Design. Difference in total Wattage between equipment removed and equipment installed.
8	Other Approved Lighting Retrofits		$ 0.10	per Watt saved	****On Approved Design. Difference in total Wattage between equipment removed and equipment installed.
	Compact Fluorescent Lamp (CFL)				ENERGY STAR® approved. Replaces an incandescent lamp of no more than four times the CFL Wattage.
9	· Integral (screw-in) or Modular ***		$ 1.50	per lamp	***Only ENERGY STAR rated CFLs are eligible for rebate. For a current qualified list see www.energystar.gov and
	· Hard-Wired CFL Fixture ***		$ 5.00	per lamp	***Only ENERGY STAR rated CFLs are eligible for rebate. For a current qualified list see www.energystar.gov and
	LED Solid State White Lighting for Exterior Landscape, Signage & Structure Only. (This rebate measure only applies to lighting not addressed by the Illuminating Engineering Society of North America (IESNA) standards or				Must be listed on ENERGY STAR qualified commercial LED lighting list or provide independent DOE certified laboratory testing documents IESNA LM-79-08, LM-80-08 and Lighting Facts label. Independent testing
10	adopted code.)		$ 0.20	per Watt saved	documents and product criteria must be provided.
11	LED Face Exit Sign		$ 15.00	per sign	
12	Photocell		$ 40.00	per unit	Exterior Lighting Only.
13	Time Clock Controls		$ 0.03	per Watt controlled	
					Lighting Wattage Controlled
	Occupancy Sensor or Sweep Control		$ 0.15	per Watt controlled	100-300 Watts
			$ 0.14	per Watt controlled	301-400 Watts
14	Sensor rebates are available for installations where no lamp retrofit took place. Sensor rebates are available for lamp retrofit projects using the post retrofit Wattages.		$ 0.13	per Watt controlled	401-600 Watts
			$ 0.12	per Watt controlled	601-1000 Watts
			$ 0.11	per Watt controlled	1001-3000 Watts
			$ 0.10	per Watt controlled	more than 3000 Watts
	Daylighting Controls - Dimming-Continuous, Fluorescent Fixtures Continuous Dimming, Fluorescent Fixtures (Day-Lighting)				
15			$ 0.50	sq. ft. of dimmable building area	Must be within 15 ft of daylighting source.
16	Energy Star - Computer	Energy Star rated computer	$ 2.00	per computer	Features include enabled sleep mode; Leased equip does not apply
17	Energy Star - Copiers	Energy Star rated copier	$ 75.00	per copier	Energy Star rated copier; Leased equip does not apply
18	Energy Star - Fax	Energy Star rated fax	$ 1.00	per fax machine	Energy Star rated fax; Leased equip does not apply
19	Energy Star - Printers	Energy Star rated printer	$ 7.00	per printer	Energy Star rated printer; Leased equip does not apply
20	Energy Star - Scanners	Energy Star rated scanner	$ 1.00	per scanner	Energy Star rated scanner; Leased equip does not apply
21	Energy Star - Water Cooler	Energy Star rated Water Cooler (Hot/Cold Water)	$ 1.00	per unit	Energy Star rated Water Cooler (Hot/Cold Water);Leased equip does not apply
22	Energy Star Server	Energy Star rated server	$ 1,200.00	per unit	Energy Star rated server; Leased equip does not apply
23	Motor - Fan System - Variable Speed Control	Fan System Optimization w/ VSD	$ 100.00	per motor horsepower	
24	Residential-Size Refrigerator	Energy Star rated Residential-Size Refrigerator ≥ 7.75 cuft	$ 15.00	per unit installed	Replacing standard efficiency unit
25	Server (Early Retirement)	Removal of inefficient standard server & replace with Energy Star qualified server	$ 50.00	per server	Removal of inefficient standard server & replace with Energy Star qualified server
26	Server Virtualization (4:1)	Using software remove a minimum of four servers with one physical server	$ 75.00	per unit	Using software remove a minimum of four servers with one physical server
27	High Efficiency Furnace/Boiler ≥ 90% AFUE or ≥ 90% thermal efficiency (TE)	Facility must be heated primarily with natural gas	$ 3.25	per kbtu-hr	Instead of installing a new standard AFUE ≤ 78% boiler/furnace
28	High Efficiency Windows (Multiple Glazed, Low Emissivity, U ≤ 0.35)	Facility must be heated primarily with natural gas	$ 3.50	per sq.ft.	Instead of installing new U ≥ 0.40 window
29	High Efficiency Water Heater EF ≥ 0.62 or ≥ 90% thermal efficiency (TE)	Facility must be heated primarily with natural gas	$ 2.50	per kbtu-hr	Instead of installing a new EF ≤ 0.594 unit or ≤ 80% thermal efficiency
30	Ceiling Insulation R ≥ 38	Facility must be heated primarily with natural gas	$ 0.30	per sq.ft.	Existing R ≤ 11
31	Exterior Wall Insulation (above grade, R ≥ 21)	Facility must be heated primarily with natural gas	$ 0.40	per sq.ft.	Existing R ≤ 9, exterior walls only

Note: Units of kbtu-hr refer to appliance output kbtu-hr not input.
Note: The program, incentives, qualifying criteria, measures, etc. are subject to change or termination without notice.
Note: All incentives/rebates not to exceed cost, whichever is less.

2012-2013 South Dakota Commercial New Construction Progam (Electric and Natural Gas)

Commercial New Construction Electric and Natural Gas Rebate Measures

	Measures	Minimum Requirements	Rebate ($/unit)	Units	Qualifiers
	Compact Fluorescent Lamp (CFL)				ENERGY STAR® approved. Replaces an incandescent lamp of no more than four times the CFL Wattage. ***Only ENERGY STAR rated CFLs are eligible for rebate. For a current qualified list see www.energystar.gov and follow the path for CFL lighting.
1	· Integral (screw-in) or Modular ***		$ 1.50	per lamp	
	· Hard-Wired CFL Fixture ***		$ 3.00	per lamp	***Only ENERGY STAR rated CFLs are eligible for rebate. For a current qualified list see www.energystar.gov and follow the path for CFL lighting.
2	LED Solid State White lighting for Exterior Landscape, Signage & Structure Only. (This rebate measure only applies to lighting not addressed by the Illuminating Engineering Society of North America (IESNA) standards or adopted code.)				Must be listed on ENERGY STAR qualified commercial LED lighting list or provide independent DOE certified laboratory testing documents IESNA LM-79-08, LM-80-08 and Lighting Facts label. Independent testing documents and product criteria must be provided.
3	MV, HPSV or MH to T-5 HO or T-8		$ 0.20	per Watt saved	****On Approved Design. Difference in total Wattage between equipment removed and equipment installed.
4	Energy Star - Computer	Energy Star rated computer	$ 0.50	per Watt saved	Features include enabled sleep mode; Leased equip does not apply
5	Energy Star - Copiers	Energy Star rated copier	$ 2.00	per computer	Energy Star rated copier; Leased equip does not apply
6	Energy Star - Fax	Energy Star rated fax	$ 75.00	per copier	Energy Star rated fax; Leased equip does not apply
7	Energy Star - Printers	Energy Star rated printer	$ 1.00	per fax machine	Energy Star rated printer; Leased equip does not apply
8	Energy Star - Scanners	Energy Star rated scanner	$ 7.00	per printer	Energy Star rated scanner; Leased equip does not apply
9	Energy Star - Water Cooler	Energy Star rated Water Cooler (Hot/Cold Water)	$ 1.00	per scanner	Energy Star rated Water Cooler (Hot/Cold Water);Leased equip does not apply
10	Energy Star Server	Energy Star rated server	$ 1.00	per unit	Energy Star rated server; Leased equip does not apply
11	Motor - Fan System - Variable Speed Control	Fan System Optimization w/ VSD	$ 1,200.00	per unit	
12	Residential-Size Refrigerator	Energy Star rated Residential-Size Refrigerator ≥ 7.75 cuft	$ 100.00	per motor HP	
13	High Efficiency (Power Burner/ Premium) Furnace/Boiler ≥90% Eff	Facility must be heated primarily with natural gas	$ 15.00	per unit installed	Replacing standard efficiency unit
14	High Efficiency Water Heater (EF ≥ 0.62 or ≥90% Thermal Efficiency)	Facility must be heated primarily with natural gas	$ 3.25	per kbtu-hr	Instead of installing a new standard AFUE ≤ 78% boiler/furnace
			$ 2.50	per kbtu-hr	Instead of installing a new EF ≤ 0.594 unit or ≤ 80% thermal efficiency

Note: Units of kbtu-hr refer to appliance output kbtu-hr not input.
Note: The program, incentives, qualifying criteria, measures, etc. are subject to change or termination without notice.
Note: All incentives/rebates not to exceed cost, whichever is less.

2012-2013 South Dakota Residential Existing Construction Progam (Electric and Natural Gas)

Residential Existing Construction Electric and Natural Gas Rebate Measures

	Measures	Minimum Requirements	Rebate ($/unit)	Units	Qualifiers
1	Compact Fluorescent Lamp (CFL) Lamp	Intergral or modular screw-in	$ 1.50	per unit	Energy Star rated CFL
2	Compact Fluorescent Lamp (CFL) Fixture	Hard-wired ballast	$ 5.00	per unit	Energy Star rated CFL fixture
3	Energy Star Dehumidifiers	Energy Star rated	$ 6.00	per unit	Energy Star rated
4	Energy Star DVD System	Energy Star rated	$ 2.50	per unit	Energy Star rated
5	Energy Star Office Computer	Energy Star rated	$ 5.00	per unit	Energy Star rated
6	Refrigerator/Freezer - Energy Star	Energy Star rated > 7.75 cuft	$ 15.00	per unit	Energy Star rated > 7.75 cuft
7	Energy Star TV	Energy Star rated	$ 2.50	per unit	Energy Star rated
8	Thermostat - Clock/Programmable	Home must be heated exclusively with electricity	$ 0.006	per sqft	Home must be heated exclusively with electricity
9	Insulation (Rim And Band Joist)	R-0 to R-19 minimum	$ 0.50	per sqft	Home must be heated exclusively with electricity
10	Insulation (Ceiling/Attic)	R-0 to R-49 minimum	$ 1.00	per sqft	Home must be heated exclusively with electricity
11	Attic/Ceiling R-0 to R-49 Insulation	Home must be heated primarily with natural gas	$ 0.50	per sqft	Existing R-0 increase to minimum R-49
12	Crawlspace R-0 to R-19 Insulation	Home must be heated primarily with natural gas	$ 0.42	per sqft	Existing R-0 increase to minimum R-19, includes rim joist insulation
13	High Efficiency Condensing Boiler	Home must be heated primarily with natural gas	$ 200.00	per unit	Existing AFUE ≤ 82% install AFUE ≥ 90%; Integral water heater may qualify for multiple rebates
14	High Efficiency Condensing Furnace	Home must be heated primarily with natural gas	$ 135.00	per unit	Existing AFUE ≤ 80% install AFUE ≥ 90%
15	High Efficiency Gas Room Heater	Home must be heated primarily with natural gas	$ 150.00	per unit	Existing AFUE ≤ 75% install AFUE ≥ 90%; Must be sealed combustion direct vent; No unvented heaters.
16	High Efficiency Water Heater	Home must be heated primarily with natural gas	$ 50.00	per unit	Existing EF ≤ 0.594 install EF ≥ 0.62
17	Programmable Thermostat	Home must be heated primarily with natural gas	$ 30.00	per unit	Existing manual thermostat install programmable unit, maximum 2 per customer
18	In-Home Energy Audit	See NOTE 2 below	NA	per home	See NOTE 2 below

General notes:
The program, incentives, rebates, qualifying criteria, measures, etc are subject to change or termination without notice.
All incentives/rebates not to exceed cost, whichever is less.
Rebate to be approximately 50% of unit cost without regard to SPB < 1.5 years in order to maximize rebates.
Rebate should be less than 50% of NPV of gas saved.

NOTE 1: CFL Distribution methods for South Dakota Residential Electric customers may be: 1) Mail-in rebate 2) Direct install through an Energy Audit and 3) CFL In-Store Coupon twice a year (Fall and Spring)
NOTE 2: South Dakota Residential electric and natural gas space and/or water heating customers may be eligible for an In-Home Energy Audit.
NOTE 2 (cont.): It is left to be decided if electric baseload customers may be eligible for a mail-in, telephone, or online Audit Survey.
NOTE 3: The In-Home Energy Audit may be run the same as it is in Montana including (if applicable): installation of CFL bulbs, installation of hot water pipe wrap and water heater tank wrap, installation of water measures (1 low-flow showerhead, 2 bathroom aerators, and 1 kitchen aerator).
NOTE 3 (cont.): The auditors may also leave (if applicable): 2 door sweeps, 2 door weather-strips, 2 window kits, 1 outlet gasket set, and 1 insulating foam can.

2012-2013 South Dakota Residential New Construction Progam (Electric and Natural Gas)

Residential New Construction Electric and Natural Gas Rebate Measures

	Measures	Minimum Requirements	Rebate ($/unit)	Units	Qualifiers
1	Compact Fluorescent Lamp (CFL) Lamp	Integral or modular screw-in	$ 1.50	per unit	Energy Star rated CFL
2	Compact Fluorescent Lamp (CFL) Fixture	Hard-wired ballast	$ 5.00	per unit	Energy Star rated CFL fixture
3	Energy Star Dehumidifiers	Energy Star rated	$ 6.00	per unit	Energy Star rated
4	Energy Star DVD System	Energy Star rated	$ 2.50	per unit	Energy Star rated
5	Energy Star Office Computer	Energy Star rated	$ 5.00	per unit	Energy Star rated
6	Refrigerator/Freezer - Energy Star	Energy Star rated > 7.75 cuft	$ 15.00	per unit	Energy Star rated > 7.75 cuft
7	Energy Star TV	Energy Star rated	$ 2.50	per unit	Energy Star rated
8	Thermostat - Clock/Programmable	Home must be heated exclusively with electricity	$ 0.006	per sqft	Home must be heated exclusively with electricity
9	High Efficiency Condensing Boiler	Home must be heated primarily with natural gas	$ 200.00	per unit	Install AFUE ≥ 90% instead of standard AFUE ≤ 82%
10	High Efficiency Condensing Furnace	Home must be heated primarily with natural gas	$ 135.00	per unit	Install AFUE ≥ 96% instead of standard AFUE ≤ 80%

General notes:
The program, incentives, rebates, qualifying criteria, measures, etc are subject to change or termination without notice.
All incentives/rebates not to exceed cost, whichever is less.
Rebate to be approximately 50% of unit cost without regard to SPB < 1.5 years in order to maximize rebates.
Rebate should be less than 50% of NPV of gas saved.

NOTE 1: CFL Distribution methods for South Dakota Residential Electric customers may be: 1) Mail-in rebate 2) Direct Install through an Energy Audit and 3) CFL In-Store Coupon twice a year (Fall and Spring)

Appendix B

DSM Program Evaluation Scope of Work

Task 1: DSM Evaluation Plan: In this task, the DSM Evaluation Contractor will be responsible for developing a comprehensive DSM Evaluation Plan to cover all DSM Evaluation tasks. This will involve the following:

A. Examination of all related program DSM Program documents available from NWE. This information includes scope of work documents for each of the Implementation Contractors for the programs they are administering for NWE and various other pertinent DSM documents.

B. Working closely with NWE and its DSM program Implementation Contractor(s) to identify existing data, records, and documents that have been accumulated in the course of providing DSM Program services to NWE.

C. Identification of other research needs for each of the DSM Programs and development of the data collection methodologies that will be used to complete the DSM Evaluation.

   1. The data collection plan will include a physical inspection and measurement plan, plus the sampling methodology and testing design.

   2. The DSM Evaluation Plan should also indicate the approach the DSM Evaluation Contractor will use to expand analysis results from the evaluation sample to the program population.

D. In addition, the DSM Evaluation Plan should include a description of how program data will be collected, organized, compiled, and reported.

E. Preparation of a DSM Evaluation Plan timeline.

Task 2: Project Management: The DSM Evaluation Contractor must designate a project manager to be NWE's key contact and maintain sufficient staff resources to effectively and efficiently complete the work. The project manager must:

A. Maintain direct communication with NWE.

B. Interface with other NWE DSM Implementation Contractors

C. Comply with DSM Evaluation schedule

D. Provide Bi-weekly Project Status Report

E. Provide quality control and assurance that work conforms to the scope of evaluation work

Task 3: DSM Program Process Evaluation: This task addresses ways to improve the NWE DSM Programs over time. This task includes examining NWE DSM Program processes for each individual DSM Program, and for each DSM Program Group, and comparing these processes to the best practices within the industry. Sub-tasks include but are not limited to evaluation of:

A. Appropriateness of program design for achieving program goals.

B. Program participation procedures.

C. Application and payment processing (ease of use, cycle time, etc.).

D. Accuracy, consistency, and completeness of each Implementation Contractor's program records, to be performed by checking a representative sample of completed program application forms and projects. Confidentiality of customer information and proprietary software shall be protected.

1. Identify data anomalies and areas for data collection improvement.

2. Identify areas where excess, unnecessary, or duplicative data collection is occurring.

E. Effectiveness of program incentive and/or rebate levels in compelling customers to take action.

F. Identify the barriers to customer participation in the DSM programs.

G. Marketing and promotional efforts by NWE and its Implementation Contractor(s).

H. Communication effectiveness between NWE and its Implementation Contractor(s).

I. Participant satisfaction with DSM Programs.

J. Results from interviewing participants and non-participants (NWE customers, trade allies, NWE personnel, Implementation Contractors) for the purpose of getting their ideas on process improvement.

K. Documentation/description/examples, for each individual program, of comparing the program processes with best practices within the industry and areas where improvements could be considered.

Task 4: DSM Program Impact Evaluation: The Program Impact Evaluation will utilize appropriate engineering calculations, sampling of on-site verifications, customer interviews and surveys, appropriate statistical techniques, and other industry-accepted practices to determine energy savings achieved by NWE DSM Programs. Where and as applicable, this evaluation will be performed for each individual DSM Program, and results will be aggregated for the entire DSM Portfolio. NWE will make available historical energy consumption data for program participants, and provide access to its Implementation Contractor's DSM Program databases. Specific sub-tasks to be completed include, but are not limited to:

A. Accurate and supportable quantification of the peak (kW) and energy (kWh, dKt) savings amounts for each program.

B. Energy savings estimates in two time periods to enable correlation with calendar and tracker year business cycles, if and as necessary.

C. Review of NWE engineering calculations used to develop energy savings estimates for measures included in DSM program offerings.

D. Review of the appropriateness and application of building simulation models used by NWE and its Implementation Contractors and model results produced for commercial DSM projects. (Proprietary software shall be protected.)

E. Physical verification of a representative sample of the DSM program installations to verify that energy conservation measures have been installed as documented by the Implementation Contractor.

F. Physical on-site measurement of a representative sample of energy projects participating in the DSM Programs. The purpose of this task is to verify the assumptions and calculations of peak (kW) and energy (kWh and dKt) savings from the Implementation Contractors' databases. The measurements shall be performed by a South Dakota state licensed Professional Engineer. The projects and installations to be measured will be selected from a statistically representative sample of completed projects.

G. Calculation of average annual energy savings for high volume measures/services and programs, for comparison to the values NWE is currently using:

1. Compact fluorescent lamps (for each watt rating used in the lighting program) delivered through distribution at events, direct installation, mail-in rebate, mail-out product, in-store coupon, and other events applicable.

2. Each of the different home and business energy audit types. The DSM Evaluation Contractor shall provide average annual energy savings for audit direct measure savings and separately for audit in-direct savings.

H. Rebate measures for all of the prescriptive rebate programs (residential & commercial) offered during the relevant program evaluation period.

I. Assessment of the rate of free riders and free drivers within each of the programs.

J. Assessment of the realization rate of DSM measures for which program incentives/rebates were paid by NWE.

K. Assessment of persistence of energy savings produced by DSM measures installed. This includes an assessment of whether building use, operation, size, or configuration has changed since DSM measures were installed.

L. Assessment of "spillover" or "leakage" of NWE funded DSM measures into non-NWE service areas and non-rebates measures in NWE service area customer homes/facilities.

Task 5: DSM Program Economic Analysis: The DSM Evaluation Contractor will evaluate the cost-effectiveness of the DSM Programs using an industry accepted benefit-cost analysis from the perspective of the Company (Utility Cost Test), from the perspective of society (Total Resource Cost Test), and from the individual ratepayer (Ratepayer Impact Measure).

This cost-effectiveness evaluation will be performed for each individual DSM Program, and results aggregated for the entire DSM Portfolio. The contractor will calculate the levelized cost of DSM acquisition for each DSM Program, and the entire DSM Portfolio.

Task 6: DSM Program Evaluation Final Report: The DSM Evaluation Contractor will prepare a high-quality, detailed and comprehensive report, including an executive summary, that describes and documents the DSM Program evaluation project and

each task therein, and presents findings and recommendations in a clear, understandable manner.