

**NorthWestern Energy**  
**Docket GE12-001**  
**South Dakota Demand Side Management Plan**  
**South Dakota Public Utility Commission (SDPUC)**

Data Request May 13, 2014

PUC Fiegan - Q1

Provide a comparison of the programs listing for 2009, 2012, and 2014.

RESPONSE: (May 28, 2014)

Please see the pages following for a comparison of the Commercial Existing Construction, Commercial New Construction, Residential Existing Construction and Residential New Construction DSM Programs planned for 2009, 2012, and 2014. The yellow highlighted cells refer to a measure that was not included in that particular year, but was included as a cost-effective measure in another year. By comparing measures across the three DSM Plan years, you can track which measures were included in one year but not in another. For example, for DSM Plan years 2009 and 2012, two measures titled "T-8 lamp 8 foot" and "T-8 HO lamp 8 foot" were included. If you follow across to DSM Plan year 2014, those two lines are highlighted in yellow as they were not included in the 2014 proposal. Those measures highlighted in blue reflect natural gas measures that may change as a result of a Natural Gas Resource Assessment being finalized in 2014 in Montana.

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**Commercial Existing Construction:**

2009 CEX Electric and Natural Gas Rebate Measures		2012 CEX Electric and Natural Gas Rebate Measures		2014 CEX Electric and Natural Gas Rebate Measures	
Measures		Measures		Measures	
1	One or Two Lamp Fixture 1/1, 2/1(Lamp/Ballast)	1	One or Two Lamp Fixture 1/1, 2/1 (lamp/ballast)	1	One or Two Lamp Fixture 1/1, 2/1 (lamp/ballast)
2	Three Lamp Fixture 3/1, 3/2 (Lamp/Ballast) *	2	Three Lamp Fixture 3/1, 3/2 (lamp/ballast)**	2	Three Lamp Fixture 3/1, 3/2 (lamp/ballast)**
3	Four Lamp Fixture 4/1, 4/2 (Lamp/Ballast)	3	Four Lamp Fixture 4/1, 4/2 (lamp/ballast)	3	Four Lamp Fixture 4/1, 4/2 (lamp/ballast)
4	T-8 lamp 4 foot	4	T-8 lamp 4 foot	4	T-8 lamp 4 foot
5	T-8 lamp 8 foot	5	T-8 lamp 8 foot		
6	T-8 HO lamp 8 foot	6	T-8 HO lamp 8 foot		
7	MV, HSPV or MH to T-5 HO	7	MV, HPSV or MH to T-5 HO or T-8	5	MV, HPSV or MH to T-8
8	Approved lighting retrofits	8	Other Approved Lighting Retrofits	6	Other Approved Lighting Retrofits
	Compact Fluorescent Lamp (CFL)		Compact Fluorescent Lamp (CFL)		Compact Fluorescent Lamp (CFL)
9	· Integral (screw-in) or Modular ***	9	· Integral (screw-in) or Modular ***	7	· Integral (screw-in) or Modular ***
	· Hard-Wired CFL Fixture ***		· Hard-Wired CFL Fixture ***		· Hard-Wired CFL Fixture ***
		10	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.)	8	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.)
10	LED Face Exit Sign	11	LED Face Exit Sign	9	LED Face Exit Sign
11	Photocell	12	Photocell	10	Photocell
		13	Time Clock Controls		
12	Wall Switch or Ceiling Mounted Occupancy Sensor or Sweep Control				
13	Wall Switch or Ceiling Mounted Occupancy Sensor or Sweep Control				
14	Wall Switch or Ceiling Mounted Occupancy Sensor or Sweep Control	14	<b>Occupancy Sensor or Sweep Control</b> 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.	11	<b>Occupancy Sensor or Sweep Control</b> 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.
		15	Daylighting Controls - Dimming-Continuous, Fluorescent Fixtures Continuous Dimming, Fluorescent Fixtures (Day-Lighting)	12	Daylighting Controls - Dimming-Continuous, Fluorescent Fixtures Continuous Dimming, Fluorescent Fixtures (Day-Lighting)
15	Mercury Vapor (MV) to High Pressure Sodium Vapor (HPSV) or Metal Halide				
16	Small Commercial Energy Audit				
				13	Anti-Sweat (Humidistat) Controls
				14	Automated Exhaust VFD Control - Parking Garage CO sensor
				15	Centrifugal Chiller - VSD Remodel for Existing
				16	Compressor VSD Retrofit
				17	Cooling Tower-Two-Speed Fan Motor
				18	Cooling Tower-VSD Fan Control
				19	Dishwashing - Commercial Chemical System
		16	Energy Star - Computer	20	Energy Star - Computer
		17	Energy Star - Copiers		
		18	Energy Star - Fax		
		19	Energy Star - Printers	21	Energy Star - Printers
		20	Energy Star - Scanners		
		21	Energy Star - Water Cooler		
		22	Energy Star Server		
				22	Exhaust Hood Makeup Air
				23	Floating Head Pressure Control
				24	Hot Food Holding Cabinets - Commercial
				25	Hot Water (SHW) Pipe Insulation
				26	Hotel Key Card or OS Room Energy Control System
				27	Insulation (Wall) ≤ R-11 existing insulation
		23	Motor - Fan System - Variable Speed Control	28	Motor - Fan System - Variable Speed Control
				29	Motor - Pump System - Variable Speed Control
				30	Night Covers for Display Cases (4.0 linear feet = 1.0 measure)
				31	Reduced Speed or Cycling of Evaporator Fans
				32	Refrigeration with Heat Recovery
		24	Residential-Size Refrigerator	33	Residential-Size Refrigerator
		25	Server (Early Retirement)	34	Server (Early Retirement)
		26	Server Virtualization (4:1)	35	Server Virtualization (4:1)
				36	Special Glass Doors for Refrigerated Reach-in Cases
				37	Strip Curtains for Freezer Walk-Ins
				38	Thermostat - Programmable
				39	Thermostat - Programmable
				40	Refrigerated Vending Machine
		27	High Efficiency Furnace/Boiler ≥ 90% AFUE or ≥ 90% thermal efficiency (TE)	41	High Efficiency Furnace/Boiler ≥ 90% AFUE or ≥ 90% thermal efficiency (TE)
		28	High Efficiency Windows (Multiple Glazed, Low Emissivity, U ≤ 0.35)		
		29	High Efficiency Water Heater EF ≥ 0.62 or ≥ 90% thermal efficiency (TE)	42	High Efficiency Water Heater EF ≥ 0.62 or ≥ 90% thermal efficiency (TE)
		30	Ceiling Insulation R ≥ 38	43	Ceiling Insulation (R ≥ 38)
		31	Exterior Wall Insulation (above grade, R ≥ 21)	44	Exterior Wall Insulation (above grade, R ≥ 21)
	* Tandem-wired fixture using one ballast for two fixtures counts as one fixture.				
	** Only ENERGY STAR rated CFL's are eligible for rebate.		Note: Units of kbtu-hr refer to appliance output kbtu-hr not input.		Note: Units of kbtu-hr refer to appliance output kbtu-hr not input.
	*** Difference in total wattage between equipment removed and equipment installed.		Note: The program, incentives, qualifying criteria, measures, etc. are subject to change or termination without notice.		Note: The program, incentives, qualifying criteria, measures, etc. are subject to change or termination without notice.
	Note 1: Lighting 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.		Note: All incentives/rebates not to exceed cost, whichever is less.		Note: All incentives/rebates not to exceed cost, whichever is less.
	Note 2: CFLs are installed during the audits and the number is limited to the greater of 20 lamps or lamps for 10% of the site's fixtures. For sites with electrically heated water, the auditors may also install water heater blankets and pipe wrap for the first ten feet of pipe leaving the heater, and low-flow showerheads and faucet aerators as needed.				

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Commercial New Construction:

2012 CNC Electric and Natural Gas Rebate Measures	2014 CNC Electric and Natural Gas Rebate Measures
Measures	Measures
1 Compact Fluorescent Lamp (CFL) · Integral (screw-in) or Modular *** · Hard-Wired CFL Fixture ***	1 Compact Fluorescent Lamp (CFL) · Integral (screw-in) or Modular *** · Hard-Wired CFL Fixture ***
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.)	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.)
3 MV, HPSV or MH to T-5 HO or T-8	3 MV, HPSV or MH to T-8
	4 Anti-Sweat (Humidistat) Controls
	5 Automated Exhaust VFD Control - Parking Garage CO sensor
	6 Automated Ventilation VFD Control (Occupancy Sensors / CO2 Sensors)
	7 Cooling Tower-Decrease Approach Temperature
	8 Cooling Tower-Two-Speed Fan Motor
	9 Cooling Tower-VSD Fan Control
	10 Defrost Demand Control - Hot Gas
	11 Dishwashing - Commercial Chemical System
4 Energy Star - Computer	12 Energy Star - Computer
5 Energy Star - Copiers	
6 Energy Star - Fax	13 Energy Star - Fax
7 Energy Star - Printers	14 Energy Star - Printers
8 Energy Star - Scanners	
9 Energy Star - Water Cooler	15 Energy Star - Water Cooler
10 Energy Star Server	
	16 Exhaust Hood Makeup Air
	17 Faucet Aerators
	18 Floating Head Pressure Control
	19 Hot Food Holding Cabinets - Commercial
	20 Hotel Key Card or OS Room Energy Control System
	21 Low-Flow Showerheads
11 Motor - Fan System - Variable Speed Control	22 Motor - Fan System - Variable Speed Control
	23 Motor - Pump System - Variable Speed Control
	24 Optimized Variable Volume Lab Hood Design
	25 PC Power Supply 80+
	26 Reduced Speed or Cycling of Evaporator Fans
	27 Refrigeration with Heat Recovery
12 Residential-Size Refrigerator	28 Residential-Size Refrigerator
	29 Special Glass Doors for Refrigerated Reach-in Cases
	30 Strip Curtains for Freezer Walk-Ins
	31 Refrigerated Vending Machine
13 High Efficiency (Power Burner/ Premium) Furnace/Boiler ≥90% Eff	32 High Efficiency (Power Burner/ Premium) Furnace/Boiler ≥90% Eff
14 High Efficiency Water Heater (EF ≥ 0.62 or ≥90% Thermal Efficiency)	33 High Efficiency Water Heater (EF ≥ 0.62 or ≥90% Thermal Efficiency)
	34 Stack Heat Exchanger
	35 Water Heater Tank Blanket/Insulation (R ≥ 11)
Note: Units of kbtu-hr refer to appliance output kbtu-hr not input.	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: 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.	Note: All incentives/rebates not to exceed cost, whichever is less.

**NEW CONSTRUCTION WAS NOT INCLUDED IN THE 2009 SOUTH DAKOTA DSM PLAN**

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Residential Existing Construction:

2009 REX Electric and Natural Gas Rebate Measures		2012 REX Electric and Natural Gas Rebate Measures		2014 REX Electric and Natural Gas Rebate Measures	
Measures		Measures		Measures	
1	Compact Fluorescent Lamp (CFL) Lamp	1	Compact Fluorescent Lamp (CFL) Lamp	1	Canned Lighting Air Tight Sealing
2	Compact Fluorescent Lamp (CFL) Fixture	2	Compact Fluorescent Lamp (CFL) Fixture	2	Compact Fluorescent Lamp (CFL) Fixture
3	Compact Fluorescent Outdoor Fixtures			3	Compact Fluorescent Lamp (CFL) Lamp
4	Torchiere Floor Lamps				
		3	Energy Star Dehumidifiers		
		4	Energy Star DVD System		
		5	Energy Star Office Computer		
		6	Energy Star TV		
		7	Refrigerator/Freezer - Energy Star	4	Refrigerator/Freezer - Energy Star
				5	Lighter Colored Shingles
				6	Doors
				7	Doors
				8	Doors - Weatherization
				9	Heat_Pump - Ground or Water-Source (Desuperheater)
				10	Duct Sealing
				11	Insulation (Basement - Wall) 2*4
		8	Insulation (Rim And Band Joist)		
		9	Insulation (Ceiling/Attic)	12	Insulation (Ceiling/Attic)
				13	Proper Sizing - Central Air Conditioner
				14	Proper Sizing - Heat Pump
		10	Thermostat - Clock/Programmable	15	Thermostat - Clock/Programmable
				16	Water_Heater Tank Blanket/Insulation
				17	Water_Heater Thermostat Setback
5	Attic/ceiling Insulation R-0 to R-38				
6	Attic/ceiling Insulation R-0 to R-49	11	Attic/Ceiling R-0 to R-49 Insulation	18	Attic/Ceiling R-0 to R-49 Insulation
7	Attic/ceiling Insulation R-11 to R-38				
8	Attic/ceiling Insulation R-11 to R-49				
9	Attic/ceiling Insulation R-19 to R-38				
10	Attic/ceiling Insulation R-19 to R-49				
11	Basement Wall Insulation R-0 to R-11				
12	Crawlspace Wall Insulation R-0 to R-19	12	Crawlspace R-0 to R-19 Insulation	19	Crawlspace R-0 to R-19 Insulation
13	Exterior Above Grade Wall Insulation R-0 to R-11				
14	Exterior Above Grade Wall Insulation R-11 to R-21				
15	Programmable Energy Star Thermostat	13	Programmable Thermostat	20	Programmable Thermostat
		14	High Efficiency Condensing Boiler	21	High Efficiency Condensing Boiler
		15	High Efficiency Condensing Furnace	22	High Efficiency Condensing Furnace
		16	High Efficiency Gas Room Heater	23	High Efficiency Gas Room Heater
		17	High Efficiency Water Heater		
				24	Boiler Diagnostic Testing, Repair and Maintenance
				25	Heater Diagnostic Testing, Repair and Maintenance
16	In-Home Energy Audit	18	In-Home Energy Audit	26	In-Home Energy Audit
17	Low Flow Showerhead				
18	Low Flow Faucet Aerator (kitchen)				
19	Low Flow Faucet Aerator (bathroom)				
20	Window Shrink Wrap Kit				
21	Weather Stripping Kit				
	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)		<b>General notes:</b>  The program, incentives, rebates, qualifying criteria, measures, etc are subject to change or termination without notice.		<b>General notes:</b>  The program, incentives, rebates, qualifying criteria, measures, etc are subject to change or termination without notice.
	NOTE 2: South Dakota Residential electric and natural gas space and/or water heating customers may be eligible for an In-Home Energy Audit; electric baseload customers may be eligible for a mail-in Audit Survey.		All incentives/rebates not to exceed cost, whichever is less.		All incentives/rebates not to exceed cost, whichever is less.
	NOTE 3: The In-Home Energy Audit may be ran 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).		Rebate to be approximately 50% of unit cost without regard to SPB < 1.5 years in order to maximize rebates.		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.		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 1: CFL Distribution methods for South Dakota Residential Electric customers may be: 1) Mail-In rebate 2) 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. It is left to be decided if electric baseload customers may be eligible for a mail-in, telephone, or online Audit Survey.		NOTE 2: South Dakota Residential electric and natural gas space and/or water heating customers may be eligible for an In-Home Energy Audit. 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 ran 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). 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.		NOTE 3: The In-Home Energy Audit may be ran the same as it is in Montana including (if applicable): 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). 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.

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2	Compact Fluorescent Lamp (CFL) Fixture	1	Compact Fluorescent Lamp (CFL) Fixture
3	Energy Star Dehumidifiers		
4	Energy Star DVD System		
5	Energy Star Office Computer		
6	Refrigerator/Freezer - Energy Star	2	Refrigerator/Freezer - Energy Star
7	Energy Star TV	3	Energy Star TV
8	Thermostat - Clock/Programmable		
		4	Doors R-11
		5	Doors R-5
		6	Faucet Aerators
		7	Faucet Aerators
		8	Heat_Pump - Ground or Water-Source (Desuperheater)
		9	Low-Flow Showerheads
		10	Pool Pump Timers
		11	Water_Heater Thermostat Setback
9	High Efficiency Condensing Boiler	12	High Efficiency Condensing Boiler
10	High Efficiency Condensing Furnace	13	High Efficiency Condensing Furnace
	<b>General notes:</b>		<b>General notes:</b>
	The program, incentives, rebates, qualifying criteria, measures, etc are subject to change or termination without notice.		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.		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 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.		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 1: CFL Distribution methods for South Dakota Residential Electric customers may be: 1) Mail-In rebate 2)CFL In-Store Coupon twice a year (Fall and Spring)

**NEW CONSTRUCTION WAS NOT INCLUDED IN THE 2009 SOUTH DAKOTA DSM PLAN**