

Schedule 5A
2017 Capital Budget Excluding AFUDC
Energy Supply
Total Company - By Utility

Northern States Power - MN
(\$000's)

Utility Desc	Parent Proj Full Desc	Total
	11806229 - ASK1C Emergent Work 2017	766
	11806231 - ASK1C 2017 Small Project Routi	250
	11806235 - ASK1C Replace 17B Feedwater He	300
	11806398 - RIV0C Emergent Work 2017	150
	11809546 - WLM0-Purch Emissions Monitorin	150
	11809666 - WLM2-Replace U2 B21 Screw Auge	100
	11945517 - BDS0C Black Dog U6 Simple Cycl	32,384
	11961393 - HBC9C Turbine Controls Replace	466
	11961430 - HBC9C 91 & 92 Batteries Replac	4
	11961474 - HBC8C Turbine Controls Replace	466
	11962228 - BDS0C Storm Water Management P	6
	11962243 - BDS0C Municipal Sewer Line	5
	11965316 - ASK1C Inst RO MEmbranes	91
	11966366 - SHCCC Bottom Ash UG Pipe Repla	341
	11966497 - SHC1C Bottom Ash Refractory Co	117
	11966525 - SHC1C Boiler Ignitor Replaceme	900
	11966541 - SHC1C Repl U1 ID Fan MV Cables	175
	11966594 - SHC1C Replace Gen H2SCW Cabine	20
	11967002 - SHCJC 12DC5 Upgrade Replacemen	789
	11967057 - SHC3C Foxboro Workstation Repl	22
	11967061 - SHC3C Gen-Xfmr Prot Relay Repl	271
	11967093 - SHC3C Level 2 Mill OH 2017 Spr	142
	11967099 - SHC3C Level 2 Mill OH 2017 Fal	142
	11968030 - BLL0-Small Capital Projects 20	25
	11970552 - REW1C U1 GENERATOR REWIND	600
	11974948 - WLM0C Screenhouse Control Repl	175
	11974950 - WLM0C Screenwash Pump Repl	65
	11974951 - WLM0C Screenhouse MCC Repl	145
	12073057 - REW0C SMALL PROJECT ROUTINES 2	30
	12075661 - SHC1C HP Steam RV Repl	130
	12076461 - ANS0C Small Project Routine	30
	12076921 - REW0C RELOCATE LANDFILL ACCESS	30
	12077766 - SER0C CSC Barrel Grabber	11
	12077767 - SER0C CSC Drum Packer Crusher	21
	12077779 - SER0C MMR Video Probe 2017	55
	12077854 - IVH0C Small Proj Routine 2017	25
	12077899 - HBC7C Turbine Controls Rplc	400
	12078022 - BDS0C 316b Entrainment Study	305
	12078212 - SHC1C Gen Core Monitor repl	10
	12078271 - SHC99-SHC99-Rpl RCD THF Drives	218
	12078294 - SHC1-Cold End AH Basket Repl.	1,000
	12078479 - WLM0C 2017 Small Cap Routine	30
	12172228 - RIV0-Small Capital Projects -	92
	12172333 - ASK1-250VDC Pnl & Batt Charger	60
	12172358 - ASK1C Repl Cyclone Sec Air Dam	397

Electric

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Utility Desc	Parent Proj Full Desc	Total
Electric Total		114,081
Grand Total		114,081

Schedule 5
2018 Capital Budget Excluding AFUDC
Energy Supply
Total Company - All Utilities

Northern States Power - MN
(\$000's)

Parent Proj Full Desc	Total
10634133 - SHCJC Coal Yard PM10 Improveme	33
11083285 - RIV7C-U7 Hydrogen Coolers Repl	289
11217403 - SHCCC U1&2 Coal Crushers Rpl	845
11217405 - SHC3C U3 Waterwall Repl	250
11217409 - SHC1C U1 Boiler Section Repl	10,000
11228131 - SER-CHM-CHN Analyzer	65
11358830 - SER-CHM-Discrete Analyzer	51
11466986 - BDS0C Phase I Demo Site Remedi	8,394
11485438 - BLLC0 Admn Bldg Battery Repl	60
11485445 - BDS5C Cooling Water Strainer R	96
11487761 - SHC1C Generatot Rectifier Repl	259
11487762 - SHC1C Generator AVR Repl	250
11487769 - SHC2C Generator AVR Repl	338
11487770 - SHC2C Generator Rectifier Repl	190
11487923 - SHC1C BFPT Controls Repl	400
11488021 - SHC2C Battery Repl	615
11488116 - SHC3C Unit Protection PLC Repl	59
11495299 - REW0C EPA 316b FINAL RETROFIT	40
11629383 - SHC2C Repl Transformers MSA	657
11629446 - SHC2C Replace u2 hp-ip-lp turb	4,050
11629449 - SHC2C drum internals - headers	100
11629462 - SHC1C Repl u1 drum internals h	300
11629470 - SHC1C Replace u1 battery	190
11629473 - SHC1C Replace U1 TRANSFORMERS	275
11629487 - SHC1C U1 Turbine Replacement	4,995
11629878 - HBC0C 316b Entrainment Counter	124
11629954 - BDS0C 316b Screenhouse	160
11629961 - BDS5C 21 Lighting Transformer	85
11630568 - SHC1C U1 Battery Charger Repl	886
11630591 - SHC1C U1 Econ Ash Piping Repl	8
11630593 - SHC1C U1 Inst CO-NOx Grid on E	394
11630616 - SHC2C U2 Upgr CO-NOx Grid on E	357
11632205 - SER-CSC-Paint Can Crusher	29
11632388 - ANS2-C-U2 replace vanes and bl	7,343
11634936 - WLM0C-10935 EPA 316b Final Ret	40
11634988 - WLM0C Replace Ash Loadout Buil	98
11635040 - WLM1C Replace U1 Lower Air Hea	63
11635042 - WLM2C Replace U2 Lower Air Hea	63
11635278 - REW2C REPLACE U2 GEN BANK TUBE	788

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Parent Proj Full Desc	Total
11635316 - REW0C TOOL BLANKET 2018	30
11635472 - REW1C REPLACE U1 SUPERHEATER	350
11644930 - ASK1C-316b Improvements	190
11783911 - HBC0C 2018 Small Project Routi	100
11783938 - HBC0C 2018 Emergent Work	150
11793487 - SHCCC 2018 Small Project routi	12,600
11793489 - SHCCC 2018 Emergent work	1,600
11793491 - SHCJC 2018 Small Project routi	200
11793501 - SHC1C Level 2 Mill OH 2018 Fal	240
11793504 - SHC1C Level 2 Mill OH 2018 Spr	240
11793506 - SHC1C Level 2 Mill OH 2018 Sum	240
11794371 - SHCJC 2018 Small Tools & Equip	182
11794375 - SHC1C 2018 Small Project Routi	750
11794391 - SHC1C Repl U1 Switchgear	367
11794466 - SHC3C 2018 Small Project Routi	605
11794475 - SHC2C Level 2 Mill OH 2018 Spr	240
11794481 - SHC2C Level 2 Mill OH 2018 Sum	240
11794484 - SHC2C Level 2 Mill OH 2018 Fal	240
11794488 - SHC2C 2018 Small Project Routi	600
11794676 - SHCJC Repl U1&2 Coal Crushr Fe	1,247
11794850 - BDS0C 2018 Tool Blanket	75
11794854 - BDS0C 2018 Small Project Routi	115
11794860 - BDS0C 2018 Emergent Work	400
11795374 - SHCCC Pond 4 Construction	4,210
11795649 - IVH0C 2018 Tool Blanket	20
11795801 - HBC0C 2018 Tool Blanket	50
11795831 - HBC7C U7 CEMS Analyzer	21
11795837 - HBC8C U8 CEMS Analyzer	21
11795913 - HBC7C U7 CT Servo Replace 2	60
11795970 - HBC9C ST L-O Blade Replacement	4,200
11797316 - ANS0C Tool Blanket 2018	20
11802870 - SER-SMC-Misc Tools & Equipment	180
11805056 - HNI0C 2018 Small Tools and Equ	15
11805109 - GDM0C 2018 Small Tools and Equ	10
11805120 - GDMC0 2018 Generator Replaceme	317
11805125 - GDMC0 Gearbox Replacemnt 2018	1,373
11805612 - NBL0C Small Tools Equipment 20	20
11805619 - NBL0C 2018 Gear Box Replacemen	1,660
11806022 - BLL0C 2018 Small Tools and Equ	20

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Parent Proj Full Desc	Total
11806222 - ASK1C Replace 17A Feedwater He	1,500
11806235 - ASK1C Replace 17B Feedwater He	1,500
11806248 - ASK1C 2018 Tool Blanket	150
11806312 - ASK0C 2018 Small Project Routi	400
11806409 - RIV0C Tool Blanket 2018	60
11806420 - RIV0C Emergent Work 2018	150
11806426 - RIV0C Demo Coal Dock Bulding	20
11807397 - SER-CHM-Misc. Tools & Equipmen	51
11807400 - SER-CHM-Automatic Visconmeter	46
11807416 - SER-MTR-Vac Pump Stator Conduc	36
11807424 - SER-RTC-Misc. Tools & Equipmen	20
11807429 - SER-MMR-Purchase Alloy Analyze	38
11807447 - SER-MMR-Purchase Video Probe (	55
11807453 - SER-MMR-Misc. Tools & Equipmen	20
11807918 - WLM0C /10882 2018 Tools Blanke	30
11809489 - WLM1-U1/10891 Replace U1 Super	356
11809534 - WLM0-Replace Breaker	125
11809546 - WLM0-Purch Emissions Monitorin	75
11809606 - WLM0C-Replace MCC and Breaker	125
11809617 - WLM0-Replace Ash Mixer	100
11809647 - WLM0-Install CEM Stack Vision	107
11809666 - WLM2-Replace U2 B21 Screw Auge	15
11945517 - BDS0C Black Dog U6 Simple Cycl	142
11949438 - WLM0C DCS Software Hardware Re	35
11961393 - HBC9C Turbine Controls Replace	1,029
11961474 - HBC8C Turbine Controls Replace	1,054
11961530 - HBC0C Fork Truck Purchase	55
11962072 - HBC8C U8 Hot Gas Path	6,000
11962228 - BDS0C Storm Water Management P	6
11962571 - BDS5C U5 CT HGP	5,942
11965373 - ASK1C Inst RO EDI Vessels	93
11965386 - ASK1C -- Emergent Work 2018	1,400
11966366 - SHCCC Bottom Ash UG Pipe Repla	244
11966406 - RIV0C -- Replace Water Treamen	275
11966484 - SHC1C Install CT Fan Vib Monit	100
11966497 - SHC1C Bottom Ash Refractory Co	96
11966516 - SHC1C 2018 Rewind 11 ID fan mo	150
11966519 - RIV0C --61&62 Battery Room Ven	85
11966520 - SHC1C Turbine LO Purifier Repl	27

Schedule 5
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Parent Proj Full Desc	Total
11966525 - SHC1C Boiler Ignitor Replaceme	1,000
11966541 - SHC1C Repl U1 ID Fan MV Cables	300
11966594 - SHC1C Replace Gen H2SCW Cabine	60
11966625 - SHC1C Oil Room Bldg Roof Repl	57
11966892 - SHC2C Inst U2 CT Fan Vib Monit	100
11966917 - SHC2C 22 Battery Replacement	67
11966938 - SHC2C Repl 22 & 24 ID Fan MV C	106
11966945 - SHC2C Replace Gen H2SCW Cabine	20
11967002 - SHCJC 12DC5 Upgrade Replacemen	595
11967042 - SHC3C Repl U3 Boiler Area Ligh	35
11967102 - SHC3C Level 2 Mill OH 2018 Spr	142
11967105 - SHC3C Level 2 Mill OH 2018 Fal	142
11968027 - BLL0-Small Capital Projects 20	25
11970552 - REW1C U1 GENERATOR REWIND	1,375
11970588 - WLM0C-Landfill Cell 10 Cap	340
11974948 - WLM0C Screenhouse Control Repl	50
11974950 - WLM0C Screenwash Pump Repl	10
11974951 - WLM0C Screenhouse MCC Repl	50
11993654 - SHC1C Turb Isolation Vlv TG	45
12073063 - REW0C SMALL PROJECT ROUTINES 2	30
12073341 - BRDW0C 2018 Small Tools and Eq	25
12075653 - SHC1C Inst Gen Dewpoint Monito	35
12075661 - SHC1C HP Steam RV Repl	20
12076462 - ANS0C Small Project Routine	30
12076921 - REW0C RELOCATE LANDFILL ACCESS	600
12077790 - SER0C PMO Gas Analyzer 2018	20
12077793 - SER0C PMO Pur Lab Transm 2018	41
12077849 - IVH Gas Vlv Ctrl Replace U1-2	103
12077855 - IVH1-Turbine Ctrls Rplc U1-2	542
12077898 - HBC7C BFP Mezz Access	50
12078022 - BDS0C 316b Entrainment Study	283
12078035 - BDS5C CT Blade Path Thermocpl	69
12078037 - BDS5C CT Expansion Joint	170
12078039 - BDS5C CT Insulation	175
12078040 - BDS5C CT Row 1 Inner Sup Ring	197
12078042 - BDS5C Comb Dynamics System	450
12078091 - BLL0-Mk. V Card Replacement -	32
12078102 - BLL8-U8 BLL Compressor Blade R	244
12078185 - SHC0-HVAC U1 2 4 KV Bus Room	325

Schedule 5
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Parent Proj Full Desc	Total
12078212 - SHC1C Gen Core Monitor repl	139
12078294 - SHC1-Cold End AH Basket Repl.	1,000
12078299 - SHC1-U1 Replace LP Turbines	100
12078343 - SHC2C Valve Rpl HP Stm Relief	155
12172024 - WLM0C 2018 Small Project Rout	30
12172228 - RIV0-Small Capital Projects -	8
12172229 - RIV0-Small Capital Projects -	92
12172333 - ASK1-250VDC Pnl & Batt Charger	350
12172336 - ASK1-Ammonia Vaporizer Replace	15
12172342 - ASK1-East Hydrogen Cooler Retu	550
12172350 - ASK1-West Hydrogen Cooler Retu	550
12172354 - ASK1C Install Floor Tap Cleani	35
12172356 - ASK1C Install Upper Pond Oil W	28
12172358 - ASK1C Repl Cyclone Sec Air Dam	3,602
12172364 - ASK99-Crusher Dust Coll PLC Re	60
12173754 - RIV7C-Circ Water Pumps Replace	305
Grand Total	113,124