

**AGENDA**  
**PUBLIC UTILITIES COMMISSION**  
**February 13, 2018**  
**3:00 P.M.**

- A. Call to Order
  
- B. Roll Call
  
- C. Approve Consent Agenda
  - 1. Approve Agenda
  - 2. Approve Meeting Minutes
  - 3. Payments Report
  
- D. PUC Opening, Chairperson
  
- E. Gopher Lift Station
  
- F. Climate Action Plan Update
  
- G. Long range planning for energy transition
  
- H. Renewable Energy Projects
  
- I. Other Items
  
- J. Adjourn

*Public Utilities Commission*  
*Minutes*  
*December 5, 2018*

Meeting was called to order by Karl Hansen at 3:05 p.m.

Members present: Tim Kennedy, George Wilkes, and Karl Hansen

Absent:

Staff Present: Mike Roth, Tom Nelson, and Haden Hinchman

Others Present:

**Motion by Kennedy, seconded by Wilkes to approve the consent agenda. Approved unanimously.**

The Commission reviewed the rate proposals for 2019.

**Motion by Wilkes, seconded by Kennedy to approve a two percent increase in sewer rates and no increase to electricity and water rates. Approved unanimously.**

Tom Nelson presented his request to replace a large pump at the wastewater plant.

**Motion by Kennedy, seconded by Wilkes to approve the purchase of a SFD4-V pump for \$9484. Approved unanimously.**

The Commission discussed the results of the sewer replacement near Benny's Collision.

The Commission briefly discussed the schedule and plans for the old PUC garage.

George Wilkes presented a summary of the SMMPA meeting in New Prague.

There being no further business, the meeting adjourned at 3:21 p.m.



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**Payments**

**Current Period: January 2019**

Batch Name	01/10/19 AP	User Dollar Amt	\$671,757.35		
Payments		Computer Dollar Amt	\$671,757.35		
				\$0.00	<b>In Balance</b>
Refer	76738	UTILITY CONSULTANTS, INC	-		
Cash Payment	E 602-49480-300	Professional Svcs (GENE	2018		\$514.80
Invoice	10041	12/27/2018			
Transaction Date	1/3/2019	MAIN CHECKING G	10100	<b>Total</b>	\$514.80
Refer	76739	NORTH SHORE WASTE	-		
Cash Payment	E 602-49480-384	Refuse/Garbage Disposa	2018		\$92.43
Invoice	65517	12/31/2018			
Transaction Date	1/3/2019	MAIN CHECKING G	10100	<b>Total</b>	\$92.43
Refer	76740	RED VALVE CO.	-		
Cash Payment	E 602-49480-404	Repairs/Maint Machinery	2018		\$1,003.87
Invoice	666545	12/26/2018			
Transaction Date	1/3/2019	MAIN CHECKING G	10100	<b>Total</b>	\$1,003.87
Refer	76744	GRAND MARAIS AUTO PARTS, INC	-		
Cash Payment	E 601-49430-382	Fire Hydrant Utilities	2018		\$185.99
Invoice	acct#1160	12/19/2018			
Transaction Date	1/3/2019	MAIN CHECKING G	10100	<b>Total</b>	\$185.99
Refer	76746	ALLIED GENERATORS	-		
Cash Payment	E 604-49551-317	Contracted Services	2018		\$10,990.00
Invoice	18906	12/28/2018			
Transaction Date	1/3/2019	MAIN CHECKING G	10100	<b>Total</b>	\$10,990.00
Refer	76748	LHB ENGINEERS & ARCHITECTS	-		
Cash Payment	E 602-49451-530	Capital Outlay Improvem	2018		\$3,114.45
Invoice	180710.00-3	12/12/2018			
Transaction Date	1/3/2019	MAIN CHECKING G	10100	<b>Total</b>	\$3,114.45
Refer	76752	AMERICAN WATER WORKS ASSN	-		
Cash Payment	E 601-49440-436	Membership Dues	2019 - 00605005		\$79.00
Invoice	7001639264	11/27/2018			
Transaction Date	1/3/2019	MAIN CHECKING G	10100	<b>Total</b>	\$79.00
Refer	76753	TOSHIBA BUSINESS SOLUTIONS	-		
Cash Payment	E 604-49590-200	Office Supplies (GENER	2018		\$101.66
Invoice	15028898	12/17/2018			
Cash Payment	E 601-49440-200	Office Supplies (GENER	2018		\$28.59
Invoice	15028898	12/17/2018			
Cash Payment	E 602-49490-200	Office Supplies (GENER	2018		\$28.59
Invoice	15028898	12/17/2018			
Transaction Date	1/3/2019	MAIN CHECKING G	10100	<b>Total</b>	\$158.84
Refer	76755	GREAT RIVER ENERGY	-		
Cash Payment	E 604-49570-317	Contracted Services	2018		\$3,588.50
Invoice	U1811G375	12/21/2018			
Transaction Date	1/3/2019	MAIN CHECKING G	10100	<b>Total</b>	\$3,588.50
Refer	76756	US BANK	-		



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**Payments**

**Current Period: January 2019**

<b>Cash Payment</b>	E 601-47027-611 Bond Interest	2019		<b>\$777.83</b>
Invoice 133	12/21/2018			
<b>Cash Payment</b>	E 601-47027-620 Fiscal Agent s Fees	2019		<b>\$203.21</b>
Invoice 133	12/21/2018			
Transaction Date	1/3/2019	MAIN CHECKING G	10100	<b>Total</b> <u><b>\$981.04</b></u>

**Fund Summary**

	10100 MAIN CHECKING GMSB	
101 GENERAL FUND		\$11,113.67
211 LIBRARY		\$237.46
215 LIBRARY RESTRICTED FUND		\$1,406.79
301 DEBT SERVICE FUND		\$629,666.25
601 WATER		\$1,274.62
602 SEWER		\$4,754.14
604 ELECTRIC		\$14,680.16
609 MUNICIPAL LIQUOR FUND		\$8,624.26
		<u>\$671,757.35</u>

Pre-Written Checks	\$0.00
Checks to be Generated by the Computer	\$20,708.92
<b>Total</b>	<u>\$20,708.92</u>

Batch Name	12/26/18 AP	User Dollar Amt	\$502.41
Payments		Computer Dollar Amt	\$502.41
			<u>\$0.00</u> <b>In Balance</b>

Refer	76771 WEX BANK	Ck# 004449E 12/26/2018	
<b>Cash Payment</b>	E 604-49570-212 Motor Fuels		<b>\$185.75</b>
Invoice 57130493	12/23/2018		
<b>Cash Payment</b>	E 604-49570-212 Motor Fuels		<b>\$19.08</b>
Invoice 57134509	12/23/2018		
Transaction Date	12/26/2018	MAIN CHECKING G	10100 <b>Total</b> <u><b>\$204.83</b></u>

**Fund Summary**

	10100 MAIN CHECKING GMSB	
101 GENERAL FUND		\$297.58
604 ELECTRIC		\$204.83
		<u>\$502.41</u>

Pre-Written Checks	\$204.83
Checks to be Generated by the Computer	\$0.00
<b>Total</b>	<u>\$204.83</u>



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## Payments

City of Grand Marais

Current Period: January 2019

Batch Name	01/31/19 AP	User Dollar Amt	\$550,175.49
Payments		Computer Dollar Amt	\$550,175.49
			\$0.00 In Balance

Refer	76807	<i>PUBLIC UTILITIES COMMISSION1</i>	Ck# 004465E 1/23/2019		
Cash Payment	E 602-49451-380	Utility Services (GENER	2018		\$950.57
Invoice	January 2019	12/28/2018			
Cash Payment	E 602-49480-380	Utility Services (GENER	2018		\$3,076.30
Invoice	January 2019	12/28/2018			
Cash Payment	E 601-49420-380	Utility Services (GENER	2018		\$1,802.13
Invoice	January 2019	12/28/2018			
Cash Payment	E 604-49551-380	Utility Services (GENER	2018		\$33.72
Invoice	January 2019	12/28/2018			
Transaction Date	1/17/2019	MAIN CHECKING G	10100	<b>Total</b>	<b>\$5,862.72</b>
Refer	76808	<i>STUART C IRBY CO</i>	-		
Cash Payment	E 604-49570-210	Operating Supplies (GEN	2019		\$86.42
Invoice	S011189288.001	1/23/2019			
Cash Payment	E 604-49570-210	Operating Supplies (GEN	2019		\$202.55
Invoice	S011157682.003	1/4/2019			
Transaction Date	1/24/2019	MAIN CHECKING G	10100	<b>Total</b>	<b>\$288.97</b>
Refer	76810	<i>COMO OIL &amp; PROPANE</i>	-		
Cash Payment	E 602-49480-217	Heating Fuel	2019		\$604.92
Invoice	1608659	1/6/2019			
Transaction Date	1/24/2019	MAIN CHECKING G	10100	<b>Total</b>	<b>\$604.92</b>
Refer	76811	<i>BOBCAT OF DULUTH, INC.</i>	-		
Cash Payment	E 601-49430-404	Repairs/Maint Machinery	2019		\$60.34
Invoice	31128	1/15/2019			
Cash Payment	E 602-49451-404	Repairs/Maint Machinery	2019		\$60.34
Invoice	31128	1/15/2019			
Cash Payment	E 604-49570-221	Equipment Parts/Building	2019		\$211.20
Invoice	31128	1/15/2019			
Transaction Date	1/24/2019	MAIN CHECKING G	10100	<b>Total</b>	<b>\$331.88</b>
Refer	76813	<i>GEORGE BOUGALIS AND SONS, C</i>	-		
Cash Payment	E 602-49451-530	Capital Outlay Improvem	2018		\$187,702.28
Invoice	2920-1	11/29/2018			
Transaction Date	1/24/2019	MAIN CHECKING G	10100	<b>Total</b>	<b>\$187,702.28</b>
Refer	76814	<i>US BANK</i>	-		
Cash Payment	E 601-47027-611	Bond Interest	2019		\$777.83
Invoice	134	1/21/2019			
Cash Payment	E 601-47027-620	Fiscal Agent s Fees	2019		\$190.23
Invoice	134	1/21/2019			
Transaction Date	1/24/2019	MAIN CHECKING G	10100	<b>Total</b>	<b>\$968.06</b>
Refer	76831	<i>HACH COMPANY</i>	-		
Cash Payment	E 602-49480-210	Operating Supplies (GEN	2019		\$258.31
Invoice	11278931	1/2/2019			
Cash Payment	E 601-49420-210	Operating Supplies (GEN	2019		\$13.75
Invoice	11282440	1/4/2019			



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## Payments

City of Grand Marais

Current Period: January 2019

<b>Cash Payment</b>	E 601-49420-210 Operating Supplies (GEN 2019				\$343.35
Invoice 11287945	1/8/2019				
Transaction Date	1/24/2019	MAIN CHECKING G	10100	<b>Total</b>	<b>\$615.41</b>
Refer	76832 COOK COUNTY HOME CENTER	-			
<b>Cash Payment</b>	E 602-49480-404 Repairs/Maint Machinery 2018				\$174.68
Invoice 1160 Water/Sewer	12/31/2018				
<b>Cash Payment</b>	E 602-49480-401 Repairs/Maint Buildings 2018				\$119.67
Invoice 1160 Water/Sewer	12/31/2018				
Transaction Date	1/24/2019	MAIN CHECKING G	10100	<b>Total</b>	<b>\$294.35</b>
Refer	76833 SMMPA			<b>Ck# 004466E 1/25/2019</b>	
<b>Cash Payment</b>	E 604-49560-388 Purchase Power 2018				\$166,972.69
Invoice DECEMBER 201	1/25/2019				
Transaction Date	1/24/2019	MAIN CHECKING G	10100	<b>Total</b>	<b>\$166,972.69</b>
Refer	76835 MN DNR - OMB	-			
<b>Cash Payment</b>	E 601-49440-230 State Fees 2019				\$546.90
Invoice 1985-2118	1/8/2019				
Transaction Date	1/24/2019	MAIN CHECKING G	10100	<b>Total</b>	<b>\$546.90</b>
Refer	76836 MMUA	-			
<b>Cash Payment</b>	E 604-49570-308 Safety Assistance Progra 2019				\$450.00
Invoice 52757	1/8/2019				
<b>Cash Payment</b>	E 604-49590-436 Membership Dues 2019				\$4,377.00
Invoice 52563	1/4/2019				
Transaction Date	1/24/2019	MAIN CHECKING G	10100	<b>Total</b>	<b>\$4,827.00</b>
Refer	76838 HAWKINS, INC.	-			
<b>Cash Payment</b>	E 601-49420-218 Operating Supplies- Che 2019				\$277.52
Invoice 4424225	1/4/2019				
Transaction Date	1/24/2019	MAIN CHECKING G	10100	<b>Total</b>	<b>\$277.52</b>
Refer	76840 GREAT RIVER ENERGY	-			
<b>Cash Payment</b>	E 604-49590-317 Contracted Services 2019				\$2,142.00
Invoice U1812G375	1/11/2019				
Transaction Date	1/24/2019	MAIN CHECKING G	10100	<b>Total</b>	<b>\$2,142.00</b>
Refer	76841 MCMILLAN OUTDOOR & TREE SE	-			
<b>Cash Payment</b>	E 604-49590-317 Contracted Services 2018				\$4,551.75
Invoice 1388	1/13/2019				
Transaction Date	1/24/2019	MAIN CHECKING G	10100	<b>Total</b>	<b>\$4,551.75</b>
Refer	76842 STEVE S SPORTS AND AUTO	-			
<b>Cash Payment</b>	E 602-49480-404 Repairs/Maint Machinery 2018				\$81.98
Invoice 276212	11/29/2018				
Transaction Date	1/24/2019	MAIN CHECKING G	10100	<b>Total</b>	<b>\$81.98</b>
Refer	76844 SAWTOOTH MOUNTAIN CLINIC, IN	-			
<b>Cash Payment</b>	E 604-49590-390 Conservation Improveme 2019				\$10,080.00
Invoice Lighting Rebate	1/14/2019				
Transaction Date	1/24/2019	MAIN CHECKING G	10100	<b>Total</b>	<b>\$10,080.00</b>
Refer	76845 GOPHER STATE ONE CALL	-			



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**Payments**

**City of Grand Marais**

**Current Period: January 2019**

<b>Cash Payment</b>	E 604-49590-317 Contracted Services	2019			<b>\$50.00</b>
Invoice	9000974	1/15/2019			
Transaction Date	1/24/2019		MAIN CHECKING G	10100	<b>Total \$50.00</b>
Refer	76847 BLOOMQUIST, LEN	-			
<b>Cash Payment</b>	E 604-49570-220 Repair/Maint Supply (GE	2019			<b>\$53.05</b>
Invoice	999008425921	1/15/2019			
Transaction Date	1/24/2019		MAIN CHECKING G	10100	<b>Total \$53.05</b>
Refer	76848 ACME TOOLS	-			
<b>Cash Payment</b>	E 604-49570-221 Equipment Parts/Building	2019			<b>\$124.50</b>
Invoice	6334634	1/15/2019			
Transaction Date	1/24/2019		MAIN CHECKING G	10100	<b>Total \$124.50</b>
Refer	76849 MN DEPT OF PUBLIC SAFETY-EPC	-			
<b>Cash Payment</b>	E 601-49440-230 State Fees	1600500062018 M-97964			<b>\$100.00</b>
Invoice	160050006	1/14/2019			
<b>Cash Payment</b>	E 602-49490-230 State Fees	1600500072018 M-97967			<b>\$25.00</b>
Invoice	160050006	1/14/2019			
Transaction Date	1/24/2019		MAIN CHECKING G	10100	<b>Total \$125.00</b>
Refer	76870 COMO OIL & PROPANE	-			
<b>Cash Payment</b>	E 602-49480-217 Heating Fuel	2019			<b>\$501.96</b>
Invoice	1653663	1/23/2019			
Transaction Date	1/25/2019		MAIN CHECKING G	10100	<b>Total \$501.96</b>
Refer	76871 STUART C IRBY CO	-			
<b>Cash Payment</b>	E 604-49570-210 Operating Supplies (GEN	2019			<b>\$231.65</b>
Invoice	S011196248.001	1/24/2019			
Transaction Date	1/25/2019		MAIN CHECKING G	10100	<b>Total \$231.65</b>
Refer	76874 JOHNSON S FOODS	-			
<b>Cash Payment</b>	E 604-49570-210 Operating Supplies (GEN	2018			<b>\$28.53</b>
Invoice	44003871848	12/31/2018			
Transaction Date	1/25/2019		MAIN CHECKING G	10100	<b>Total \$28.53</b>

**Fund Summary**

10100 MAIN CHECKING GMSB

101 GENERAL FUND	\$135,841.20
211 LIBRARY	\$3,081.83
215 LIBRARY RESTRICTED FUND	\$1,935.43
601 WATER	\$4,112.05
602 SEWER	\$193,556.01
604 ELECTRIC	\$189,595.06
609 MUNICIPAL LIQUOR FUND	\$22,053.91
	<hr/>
	\$550,175.49

Pre-Written Checks	\$172,835.41
Checks to be Generated by the Computer	\$214,427.71
<b>Total</b>	<hr/> <b>\$387,263.12</b>



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## Payments

City of Grand Marais

Current Period: December 2018

Batch Name	12/07/18 APP	User Dollar Amt	\$93,495.20	
	Payments	Computer Dollar Amt	\$93,495.20	
				\$0.00 In Balance
Refer	76572 MN DEPT OF REVENUE-EFTPS		Ck# 004420E 12/6/2018	
Cash Payment	G 601-20800 Taxes Due (State MN)			\$801.00
Invoice	1-895-060-928	11/30/2018		
Cash Payment	G 604-20800 Taxes Due (State MN)			\$12,688.00
Invoice	1-895-060-928	11/30/2018		
Transaction Date	12/6/2018	MAIN CHECKING G	10100	<b>Total</b> \$13,489.00
Refer	76585 HAWKINS, INC.		-	
Cash Payment	E 601-49420-218 Operating Supplies- Che			\$3,008.67
Invoice	4394003	11/7/2018		
Transaction Date	12/6/2018	MAIN CHECKING G	10100	<b>Total</b> \$3,008.67

### Fund Summary

	10100 MAIN CHECKING GMSB	
101 GENERAL FUND		\$20,802.14
211 LIBRARY		\$52.00
601 WATER		\$3,809.67
604 ELECTRIC		\$12,688.00
609 MUNICIPAL LIQUOR FUND		\$56,143.39
		<u>\$93,495.20</u>

Pre-Written Checks	\$13,489.00
Checks to be Generated by the Computer	\$3,008.67
Total	<u>\$16,497.67</u>



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## Payments

City of Grand Marais

Current Period: December 2018

Batch Name	12/13/18 AP	User Dollar Amt	\$313,127.04
Payments		Computer Dollar Amt	\$313,127.04
			\$0.00 <b>In Balance</b>

Refer	<u>76590 PUBLIC UTILITIES COMMISSION1</u>	<u>Ck# 004421E 12/7/2018</u>	
Cash Payment	E 602-49451-380 Utility Services (GENER		\$1,065.67
Invoice	DECEMBER BILL 12/1/2018		
Cash Payment	E 602-49480-380 Utility Services (GENER		\$3,704.14
Invoice	DECEMBER BILL 12/1/2018		
Cash Payment	E 601-49420-380 Utility Services (GENER		\$2,016.79
Invoice	DECEMBER BILL 12/1/2018		
Cash Payment	E 604-49551-380 Utility Services (GENER		\$32.40
Invoice	DECEMBER BILL 12/1/2018		
Transaction Date	12/6/2018	MAIN CHECKING G 10100	<b>Total</b> \$6,819.00
Refer	<u>76594 SMMPA</u>	<u>Ck# 004422E 12/26/2018</u>	
Cash Payment	E 604-49560-388 Purchase Power		\$163,641.37
Invoice	NOVEMBER 201 12/1/2018		
Transaction Date	12/7/2018	MAIN CHECKING G 10100	<b>Total</b> \$163,641.37
Refer	<u>76598 COOK COUNTY HOME CENTER</u>	-	
Cash Payment	E 602-49480-401 Repairs/Maint Buildings		\$196.53
Invoice	1160 11/30/2018		
Cash Payment	E 601-49430-240 Small Tools and Minor E		\$59.99
Invoice	1160 11/30/2018		
Cash Payment	E 602-49451-220 Repair/Maint Supply (GE		\$137.45
Invoice	1160 11/30/2018		
Cash Payment	E 602-49451-220 Repair/Maint Supply (GE		\$42.87
Invoice	1160 11/30/2018		
Transaction Date	12/7/2018	MAIN CHECKING G 10100	<b>Total</b> \$436.84
Refer	<u>76599 WESTERN LAKE SUPERIOR SANIT</u>	-	
Cash Payment	E 602-49480-317 Contracted Services		\$21,744.01
Invoice	7810 12/4/2018		
Transaction Date	12/7/2018	MAIN CHECKING G 10100	<b>Total</b> \$21,744.01
Refer	<u>76602 GRAND MARAIS AUTO PARTS, INC</u>	-	
Cash Payment	E 604-49570-220 Repair/Maint Supply (GE		\$31.41
Invoice	2088 11/21/2018		
Transaction Date	12/7/2018	MAIN CHECKING G 10100	<b>Total</b> \$31.41
Refer	<u>76603 GRANITE ELECTRIC, LLC</u>	-	
Cash Payment	E 604-49570-317 Contracted Services		\$675.00
Invoice	2018-671 11/19/2018		
Transaction Date	12/7/2018	MAIN CHECKING G 10100	<b>Total</b> \$675.00
Refer	<u>76607 G&amp;G SEPTIC</u>	-	
Cash Payment	E 602-49451-317 Contracted Services		\$375.00
Invoice	17088 11/23/2018		
Transaction Date	12/7/2018	MAIN CHECKING G 10100	<b>Total</b> \$375.00
Refer	<u>76608 TOM KRIZ</u>	-	
Cash Payment	E 601-49430-240 Small Tools and Minor E		\$200.00
Invoice	BACKFLOWTES 10/25/2018		



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## Payments

City of Grand Marais

Current Period: December 2018

Transaction Date	12/7/2018	MAIN CHECKING G 10100	<b>Total</b>	<b>\$200.00</b>
Refer	76610 MINNESOTA DEPARTMENT OF CO	-		
Cash Payment	E 604-49590-390 Conservation Improve			\$481.21
Invoice	THIRD QUARTE 12/3/2018			
Transaction Date	12/7/2018	MAIN CHECKING G 10100	<b>Total</b>	<b>\$481.21</b>
Refer	76611 NORDIC ELECTRIC	-		
Cash Payment	E 602-49451-228 Repair & Maintenance			\$240.74
Invoice	16024 11/12/2018			
Transaction Date	12/7/2018	MAIN CHECKING G 10100	<b>Total</b>	<b>\$240.74</b>
Refer	76612 NORTH SHORE WASTE	-		
Cash Payment	E 602-49480-384 Refuse/Garbage Dispos			\$92.43
Invoice	65211 11/30/2018			
Transaction Date	12/7/2018	MAIN CHECKING G 10100	<b>Total</b>	<b>\$92.43</b>
Refer	76615 ARROWHEAD COOPERATIVE	Ck# 004423E 12/20/2018		
Cash Payment	E 604-49590-321 Telephone			\$191.11
Invoice	2244 12/1/2018			
Cash Payment	E 602-49490-321 Telephone			\$129.33
Invoice	2121 12/1/2018			
Transaction Date	12/7/2018	MAIN CHECKING G 10100	<b>Total</b>	<b>\$320.44</b>
Refer	76616 STUART C IRBY CO	-		
Cash Payment	E 604-49570-210 Operating Supplies (GEN			\$311.38
Invoice	S010986410.005 11/30/2018			
Transaction Date	12/7/2018	MAIN CHECKING G 10100	<b>Total</b>	<b>\$311.38</b>
Refer	76617 TOSHIBA BUSINESS SOLUTIONS	-		
Cash Payment	E 604-49590-200 Office Supplies (GENER			\$54.68
Invoice	14971672 11/26/2018			
Cash Payment	E 601-49440-200 Office Supplies (GENER			\$15.39
Invoice	14971672 11/26/2018			
Cash Payment	E 602-49490-200 Office Supplies (GENER			\$15.38
Invoice	14971672 11/26/2018			
Transaction Date	12/7/2018	MAIN CHECKING G 10100	<b>Total</b>	<b>\$85.45</b>
Refer	76618 QUILL CORPORATION	-		
Cash Payment	E 604-49551-210 Operating Supplies (GEN			\$33.31
Invoice	2941587 11/26/2018			
Transaction Date	12/7/2018	MAIN CHECKING G 10100	<b>Total</b>	<b>\$33.31</b>
Refer	76619 LHB ENGINEERS & ARCHITECTS	-		
Cash Payment	E 602-49451-530 Capital Outlay Improvem			\$6,520.20
Invoice	180710.00-2 11/7/2018			
Transaction Date	12/7/2018	MAIN CHECKING G 10100	<b>Total</b>	<b>\$6,520.20</b>
Refer	76620 WEX BANK	Ck# 004424E 12/5/2018		
Cash Payment	E 604-49570-212 Motor Fuels			\$70.69
Invoice	56738918 11/23/2018			
Cash Payment	E 604-49570-212 Motor Fuels			\$330.64
Invoice	56749006 11/23/2018			
Transaction Date	12/7/2018	MAIN CHECKING G 10100	<b>Total</b>	<b>\$401.33</b>



**CITY OF GRAND MARAIS**

12/12/18 2:49 PM

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**Payments**

**City of Grand Marais**

**Current Period: December 2018**

Refer	76621 PSN	Ck# 004425E 12/3/2018		
Cash Payment	E 604-49590-432 Credit Card Charges			\$285.47
Invoice	186560 12/3/2018			
Cash Payment	E 601-49440-432 Credit Card Charges			\$80.29
Invoice	186560 12/3/2018			
Cash Payment	E 602-49490-432 Credit Card Charges			\$80.29
Invoice	186560 12/3/2018			
Transaction Date	12/7/2018	MAIN CHECKING G 10100	<b>Total</b>	<b>\$446.05</b>
Refer	76629 NORTHERN DEWATERING	-		
Cash Payment	E 602-49451-530 Capital Outlay Improvem			\$5,800.00
Invoice	36431 11/29/2018			
Transaction Date	12/7/2018	MAIN CHECKING G 10100	<b>Total</b>	<b>\$5,800.00</b>
Refer	76633 BUCK S HARDWARE HANK	-		
Cash Payment	E 602-49480-300 Professional Svcs (GENE			\$51.60
Invoice	1160 11/30/2018			
Cash Payment	E 602-49480-210 Operating Supplies (GEN			\$88.52
Invoice	1160 11/30/2018			
Cash Payment	E 602-49480-300 Professional Svcs (GENE			\$91.66
Invoice	1160 10/31/2018			
Cash Payment	E 602-49451-220 Repair/Maint Supply (GE			\$146.72
Invoice	1160 10/31/2018			
Cash Payment	E 604-49570-220 Repair/Maint Supply (GE			\$215.73
Invoice	2088 11/30/2018			
Transaction Date	12/7/2018	MAIN CHECKING G 10100	<b>Total</b>	<b>\$594.23</b>

**Fund Summary**

	10100 MAIN CHECKING GMSB	
101 GENERAL FUND		\$100,797.33
211 LIBRARY		\$1,395.96
215 LIBRARY RESTRICTED FUND		\$240.76
601 WATER		\$2,372.46
602 SEWER		\$40,522.54
604 ELECTRIC		\$166,354.40
609 MUNICIPAL LIQUOR FUND		\$1,443.59
		<u>\$313,127.04</u>

Pre-Written Checks	\$171,628.19
Checks to be Generated by the Computer	\$37,621.21
<b>Total</b>	<b>\$209,249.40</b>



# CITY OF GRAND MARAIS

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## Payments

City of Grand Marais

Current Period: February 2019

Batch Name	02/01/19 PFA			
	Payment	Computer Dollar Amt	\$50,116.05	<b>Posted</b>

Refer	76892 MN PUBLIC FACILITIES AUTHORIT Ck# 078727 2/1/2019			
Cash Payment	E 601-47016-611 Bond Interest	MPFA-97-0031-R-FY99		\$409.60
Invoice	1/7/2019			
Cash Payment	E 601-47019-601 Debt Srv Bond Principal	MPFA-00-0011-R-FY05		\$46,000.00
Invoice	1/7/2019			
Cash Payment	E 601-47019-611 Bond Interest	MPFA-00-0011-R-FY05		\$3,706.45
Invoice	1/7/2019			
Transaction Date	2/1/2019	Due 0 MAIN CHECKING G 10100	<b>Total</b>	<b>\$50,116.05</b>

### Fund Summary

	10100 MAIN CHECKING GMSB	
601 WATER		\$50,116.05
		<u>\$50,116.05</u>

Pre-Written Checks	\$50,116.05
Checks to be Generated by the Computer	\$0.00
Total	<u>\$50,116.05</u>



# CITY OF GRAND MARAIS

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## Payments

City of Grand Marais

Current Period: February 2019

Batch Name	02/14/19 AP Payments	User Dollar Amt	\$310,274.88	
		Computer Dollar Amt	\$310,274.88	
			\$0.00	<b>In Balance</b>
Refer	<u>76883 PUBLIC UTILITIES COMMISSION1</u>		<u>Ck# 004473E 2/1/2019</u>	
Cash Payment	E 602-49451-380 Utility Services (GENER	2019		\$1,006.77
Invoice	February Bills	2/1/2019		
Cash Payment	E 602-49480-380 Utility Services (GENER	2019		\$2,928.46
Invoice	February Bills	2/1/2019		
Cash Payment	E 601-49420-380 Utility Services (GENER	2019		\$2,550.84
Invoice	February Bills	2/1/2019		
Cash Payment	E 604-49551-380 Utility Services (GENER	2019		\$32.88
Invoice	February Bills	2/1/2019		
Transaction Date	1/30/2019	MAIN CHECKING G	10100	<b>Total</b> \$6,518.95
Refer	<u>76904 NORTH SHORE WASTE</u>		-	
Cash Payment	E 602-49480-384 Refuse/Garbage Disposa	2019		\$92.43
Invoice	65748	1/31/2019		
Transaction Date	2/7/2019	MAIN CHECKING G	10100	<b>Total</b> \$92.43
Refer	<u>76919 UTILITY CONSULTANTS, INC</u>		-	
Cash Payment	E 602-49480-300 Professional Srvs (GENE	2019		\$551.85
Invoice	100618	1/31/2019		
Transaction Date	2/7/2019	MAIN CHECKING G	10100	<b>Total</b> \$551.85
Refer	<u>76920 MN DEPT OF REVENUE-EFTPS</u>		<u>Ck# 004483E 2/6/2019</u>	
Cash Payment	G 604-20800 Taxes Due (State MN)	2019		\$14,347.00
Invoice	0366478272	2/6/2019		
Cash Payment	G 601-20800 Taxes Due (State MN)	2019		\$830.00
Invoice	0366478272	2/6/2019		
Transaction Date	2/7/2019	MAIN CHECKING G	10100	<b>Total</b> \$15,177.00
Refer	<u>76922 STEVE S SPORTS AND AUTO</u>		-	
Cash Payment	E 602-49480-404 Repairs/Maint Machinery	2018		\$147.98
Invoice	276412	12/13/2018		
Cash Payment	E 602-49480-240 Small Tools and Minor E	2018		\$42.88
Invoice	276403	12/12/2018		
Transaction Date	2/7/2019	MAIN CHECKING G	10100	<b>Total</b> \$190.86
Refer	<u>76927 HANSEN, NEIL</u>		-	
Cash Payment	E 601-49430-430 Miscellaneous (GENERA	2019		\$27.21
Invoice	WORK LUNCH	1/7/2019		
Transaction Date	2/8/2019	MAIN CHECKING G	10100	<b>Total</b> \$27.21
Refer	<u>76928 SMMPA</u>		<u>Ck# 004488E 2/25/2019</u>	
Cash Payment	E 604-49560-388 Purchase Power	2019		\$194,787.52
Invoice	JANUARY 2019	2/1/2019		
Transaction Date	2/8/2019	MAIN CHECKING G	10100	<b>Total</b> \$194,787.52
Refer	<u>76929 MY BROTHERS PLACE AUTO REP</u>		-	
Cash Payment	E 602-49451-404 Repairs/Maint Machinery	2019		\$94.74
Invoice	4655	1/30/2019		
Transaction Date	2/8/2019	MAIN CHECKING G	10100	<b>Total</b> \$94.74



# CITY OF GRAND MARAIS

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## Payments

City of Grand Marais

Current Period: February 2019

Refer	76930	NORTH SHORE ANALYTICAL, INC	-				
Cash Payment	E 602-49480-300	Professional Svcs (GENE	2019			\$430.00	
Invoice	12477	2/4/2019					
Transaction Date	2/8/2019	MAIN CHECKING G	10100		<b>Total</b>	\$430.00	
Refer	76932	TOSHIBA BUSINESS SOLUTIONS	-				
Cash Payment	E 604-49590-200	Office Supplies (GENER	2019			\$71.38	
Invoice	15118205	1/25/2019					
Cash Payment	E 601-49440-200	Office Supplies (GENER	2019			\$20.07	
Invoice	15118205	1/25/2019					
Cash Payment	E 602-49490-200	Office Supplies (GENER	2019			\$20.07	
Invoice	15118205	1/25/2019					
Transaction Date	2/8/2019	MAIN CHECKING G	10100		<b>Total</b>	\$111.52	
Refer	76933	GOPHER STATE ONE CALL	-				
Cash Payment	E 602-49480-210	Operating Supplies (GEN	2019			\$5.40	
Invoice	9010975	1/31/2019					
Transaction Date	2/8/2019	MAIN CHECKING G	10100		<b>Total</b>	\$5.40	
Refer	76934	HACH COMPANY	-				
Cash Payment	E 602-49480-210	Operating Supplies (GEN	2019			\$236.22	
Invoice	11318905	1/30/2019					
Transaction Date	2/8/2019	MAIN CHECKING G	10100		<b>Total</b>	\$236.22	
Refer	76936	TWIN PORTS PAPER & SUPPLY IN	-				
Cash Payment	E 602-49480-210	Operating Supplies (GEN	2019			\$273.95	
Invoice	393519	1/29/2019					
Transaction Date	2/8/2019	MAIN CHECKING G	10100		<b>Total</b>	\$273.95	
Refer	76937	LHB ENGINEERS & ARCHITECTS	-				
Cash Payment	E 602-49451-530	Capital Outlay Improvem	2019			\$528.50	
Invoice	180710.00-4	1/18/2019					
Transaction Date	2/8/2019	MAIN CHECKING G	10100		<b>Total</b>	\$528.50	
Refer	76939	PSN			<u>Ck# 004484E 2/3/2019</u>		
Cash Payment	E 604-49590-432	Credit Card Charges	2019			\$319.72	
Invoice	189843	2/3/2019					
Cash Payment	E 601-49440-432	Credit Card Charges	2019			\$89.92	
Invoice	189843	2/3/2019					
Cash Payment	E 602-49490-432	Credit Card Charges	2019			\$89.93	
Invoice	189843	2/3/2019					
Transaction Date	2/8/2019	MAIN CHECKING G	10100		<b>Total</b>	\$499.57	
Refer	76942	GRAND MARAIS AUTO PARTS, INC	-				
Cash Payment	E 604-49570-220	Repair/Maint Supply (GE	2019			\$72.52	
Invoice	2088	1/23/2019					
Transaction Date	2/8/2019	MAIN CHECKING G	10100		<b>Total</b>	\$72.52	
Refer	76943	METERING & TECHNOLOGY SOLU	-				
Cash Payment	E 601-49430-220	Repair/Maint Supply (GE	2019			\$1,109.29	
Invoice	13459	1/22/2019					
Transaction Date	2/8/2019	MAIN CHECKING G	10100		<b>Total</b>	\$1,109.29	
Refer	76948	WEX BANK			<u>Ck# 004485E 1/23/2019</u>		



**CITY OF GRAND MARAIS**

**Payments**

City of Grand Marais

Current Period: February 2019

<b>Cash Payment</b>	E 604-49570-212 Motor Fuels	2019		<b>\$107.46</b>
Invoice	57529177	1/23/2019		
<b>Cash Payment</b>	E 601-49440-212 Motor Fuels	2019		<b>\$30.71</b>
Invoice	57529177	1/23/2019		
<b>Cash Payment</b>	E 602-49490-212 Motor Fuels	2019		<b>\$30.71</b>
Invoice	57529177	1/23/2019		
<b>Cash Payment</b>	E 602-49490-212 Motor Fuels	2019		<b>\$118.24</b>
Invoice	57532252	1/23/2019		
<b>Cash Payment</b>	E 604-49570-212 Motor Fuels	2019		<b>\$221.32</b>
Invoice	57515877	1/23/2019		
Transaction Date	2/8/2019	MAIN CHECKING G	10100	<b>Total</b> <u>\$508.44</u>
Refer	76951 <i>ARROWHEAD COOPERATIVE</i>	Ck#	004487E 2/20/2019	
<b>Cash Payment</b>	E 602-49490-321 Telephone	2019		<b>\$128.76</b>
Invoice	2121	2/1/2019		
<b>Cash Payment</b>	E 604-49590-321 Telephone	2019		<b>\$187.95</b>
Invoice	2244	2/1/2019		
Transaction Date	2/8/2019	MAIN CHECKING G	10100	<b>Total</b> <u>\$316.71</u>

**Fund Summary**

10100 MAIN CHECKING GMSB

101 GENERAL FUND	\$54,847.57
211 LIBRARY	\$1,699.15
215 LIBRARY RESTRICTED FUND	\$1,150.00
601 WATER	\$4,658.04
602 SEWER	\$6,726.89
604 ELECTRIC	\$210,147.75
609 MUNICIPAL LIQUOR FUND	\$31,045.48
	<u>\$310,274.88</u>

Pre-Written Checks	\$217,808.19
Checks to be Generated by the Computer	\$3,724.49
<b>Total</b>	<u>\$221,532.68</u>

DATE: January 10, 2019

TO: Mike Roth, City Administrator  
Grand Marais Public Utility Commission  
Grand Marais Council

FROM: Thomas Nelson  
Wastewater/Water Superintendent

RE: New Go-fer Sewer lift Station

The lift station at Go-fer cabins ( 1201 E 5<sup>th</sup> Street) has met its end of life. The guts in the 37 year old tank are rusted beyond repair and one side of the control panel is shot. We have been running on only a single pump for about 9 months. There is a new retrofit system for the tanks that does not require digging up and replacement of the tank. I would like to approve having a new control panel and tank retrofit installed at the Go-fer lift station.

See Quote from WW Goetsch

Thomas Nelson  
Water/Wastewater Superintendent.

# Quote

# WWG GOETSCH

ASSOCIATES, INC.

5250 West 74th Street  
Minneapolis, MN 55439-2226

Phone: 952-831-4340, ext. 171  
Fax: 952-831-2357

<b>To:</b>	Thomas Nelson	<b>From</b>	Steve Green, 952-374-6471
<b>Company:</b>	City of Grand Marais	<b>Date</b>	6/14/18
<b>email:</b>	wwtf@boreal.org	<b>Pages:</b>	
<b>Phone:</b>	(218) 387-1160	<b>CC:</b>	
<b>Ship to:</b>	321 East 2nd Street Grand Marais, MN 55604		

Thomas,

**You could really use a new control panel for Go-fer lift station. This new panel is a 5HP version of the same control panels you have for the other Hydromatic Grinder Lift Stations. Your guys told me that you had made a new shorted 4"x 4" pedestal to mount this on. You'll need a couple of cross member pieces to span 28" cross distance on the vertical angle iron supports.**

**1- WWG CL2 control panel for 5HP motors.....\$2773.00**

**I've included the freight to you. 2 week lead time. Labor is by others.**

**Also, the pump I brought back is in good working condition. More proof that the controls on that side of the panel are shot.**

**We've done several retrofits where we gut the materials in the station and set a half moon stainless steel base plate with new base elbows on the floor of the station, new quick disconnect brackets on the pumps, and then pipe up to the discharge with new pipe and valves. We'd also install a new hatch cover, guide pipes and upper brackets.**

**Your cost for this is.....\$7,860.00**

**Add the new panel and you'd have a new lift station for an estimated \$10,633.00**

**Let me know if this sound interesting or if you'd like more details.**

**Thanks,  
Steve**



# DRAFT Climate Action Plan

CITY OF GRAND MARAIS

| Updated January 21, 2019 |



# Grand Marais Climate Action Plan

## PROJECT SUMMARY

In 2016, Grand Marais received a Climate Report Card from a group of local youth with an overall grade of a D+. In response to the poor grade, the Grand Marais City Council passed the *Climate Inheritance Resolution* and began developing a Climate Action Plan (CAP) that “significantly reduces Grand Marais’ greenhouse gas emissions to levels that would protect our community’s children and grandchildren from the risk of climate change.” A coordinator was hired and a team of community members, business owners, city officials, and local youth developed the plan.

### ❖ EXISTING CONDITIONS REPORT

What is the current carbon footprint of Grand Marais?

- 2016 city-wide greenhouse gas emissions: **26,339 tonnes of CO<sub>2</sub>**.
- Emission sources (Figure 1).
  - *Electricity produced by coal-fired power plants.*
  - *Delivered Fuels heat buildings and certain appliances.*
  - *Transportation and travel within city limits.*
  - *Waste decomposing in landfills not within city limits.*

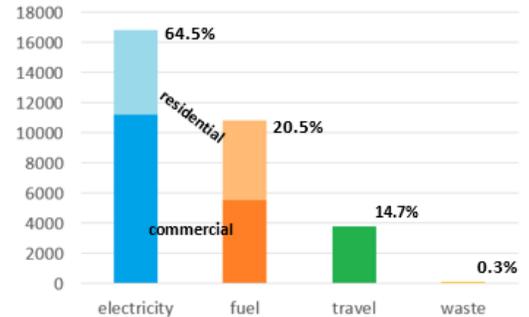


Figure 1: Current Carbon Emissions for Grand Marais (tonnes)

### ❖ GOALS

What is the expected outcome of the Grand Marais Climate Action Plan?

- The primary goal of the CAP is for the city to be carbon neutral by 2040.
- Interim goals, set for the year 2030, are shown in Table 1.
  - Interim goals aim for emissions to be 45% below 2010 emission levels.
  - These goals are consistent with the latest report from the Intergovernmental Panel on Climate Change (IPCC).

Table 1: Grand Marais Carbon Emissions Goals for 2030 (tonnes).

Goals	Current Emissions	2030 Targets
<b>Achieve 100% Renewable Energy</b>	16,990	8,238
<b>Improve Existing Building Energy Efficiency</b>	5,414	2,922
<b>Design New Buildings to be Zero Net Energy</b>		
<b>Reduce Vehicles Emissions</b>	3,878	2,044
<b>Reduce Waste Emissions</b>	56	30
<b>Total</b>	<b>26,339</b>	<b>13,234</b>

### ❖ STRATEGIES AND TACTICS MATRIX

What is the strategic pathway for achieving a net zero city by 2040?

		<i>Energy Efficiency</i> Increase EE of Building Stock	<i>Electrification</i> Reduce Reliance on Fossil Fuels	<i>Decarbonization</i> 100% Renewable Electricity
<i>Public Involvement</i>	<b>City Operations</b> Lead by Example	-Retrofit city owned buildings to be ZNE. -Replace streetlights with smart LED technology. -Energy benchmarking and disclosure for public buildings. -No idling law for city vehicles. -Develop a city-wide compost collection facility. -Expand city wide recycling program. -City-wide zero waste plan.	-Electrify water and space heating. -Expand EV infrastructure. -Replace all city-owned vehicles with EV.	-Municipal solar installations. -Biodiesel pilot project. -Lease land to a 3 <sup>rd</sup> party solar/wind developer. -Partner with SMMPA to develop a large-scale solar PV array at a local site. -Continue to plant trees and conserve greenspace within city limits.
	<b>Incentivize</b> Funding/Loans for Carbon Reduction Projects	-Commercial/Residential audit and weatherization team.	-PUC funded loan programs for heating appliance replacement. -Funding for LED replacement. -EV incentives.	-Revolving loan program to provide the upfront costs of solar installation (Solar Advisory Committee).
	<b>Require</b> Laws and Ordinances	-Require energy benchmarking and disclosure for commercial buildings. -(Assess) Stretch energy code for new and existing buildings. -Implement a lighting system upgrade laws. -Heating appliance efficiency codes.	-Heating appliance replacement codes.	-Solar access and building readiness laws. -Municipal energy to be 100% from renewable sources.
	<b>Educate</b> Resources and Guidance	-Education and outreach about commercial/residential efficiency programs. -CAP Portal	-Heating appliance replacement resources. -Public information seminars on the costs and benefits of EV in Grand Marais. -CAP Portal	-Solar Advisory Committee. -CAP Portal. -Solar education and outreach programs.
	<b>Encourage</b> Remove Barriers to Carbon Reduction Projects	-Implement a residential audit and weatherization program. -Encourage commercial energy efficiency programs. -Promote energy benchmarking and disclosure for residential buildings. -Aid in the development of a group purchasing program of commonly used items.	-Aid in the logistics of heating appliance replacement.	-Solar Advisory Committee.
	<b>Reward</b> Benefits for Efficiency and Renewable Energy Improvements	-Structure utility rates to value energy efficiency.	-Structure utility rates to value electric heating appliances.	-Structure utility rates to value solar power. -EV-PV charging premiums.

# Grand Marais Climate Action Plan

## CONTENTS

<b>Greenhouse Gas Inventory</b> .....	<b>5</b>
<b>Goals</b> .....	<b>6</b>
<b>Strategies</b> .....	<b>7</b>
Strategies Matrix.....	<b>9</b>
<b>Tactics</b> .....	<b>10</b>
<b>Reporting</b> .....	<b>18</b>
<b>Funding</b> .....	<b>19</b>

# Grand Marais Climate Action Plan GREENHOUSE GAS INVENTORY

\*See [Appendix 1](#) for full Greenhouse Gas Inventory.

## A. Energy Use Graphs

The following graphs presented with data from Great Plains Institute and Regional Indicators Initiative depict Grand Marais' energy use profile.

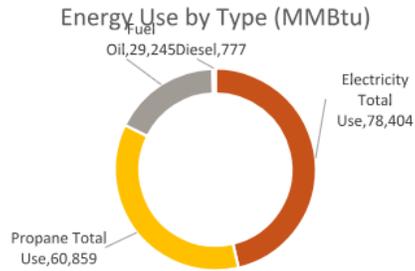


Figure 1 Data Source: 2013 Regional Indicators Initiative Report

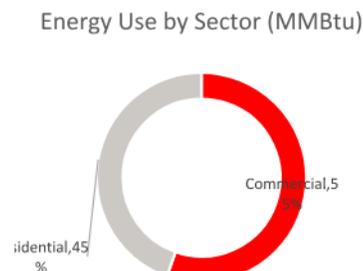


Figure 2 Data Source: 2013 Regional Indicators Initiative Report

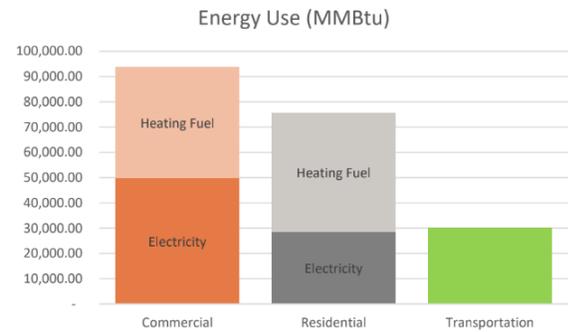
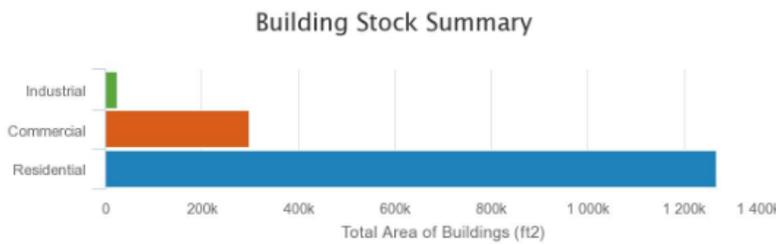


Figure 6 Data Source: 2013 Regional Indicators Initiative Report

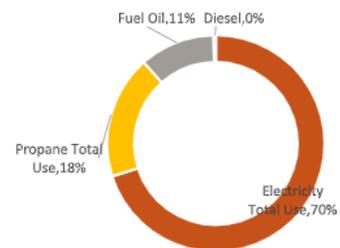
## B. Carbon Emissions Sources

The primary sources of emissions in Grand Marais comes from buildings and transportation.

### Buildings

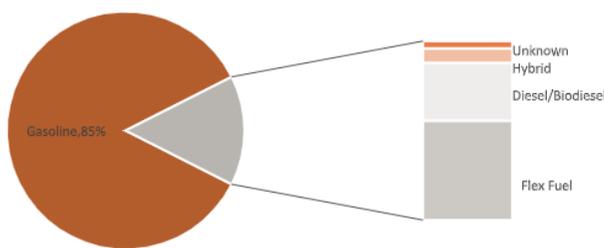


### Building GHG by Energy Type (Tons CO2)



### Transportation

#### Grand Marais Light Duty Vehicles by Fuel Type



## C. Greenhouse Gas Inventory Takeaways

While there are roughly three times more residential buildings than commercial ones, the commercial sector is responsible for more than half the energy use in Grand Marais.

While heating fuel and electricity are used in roughly even amounts, emissions from electricity accounts for more than two thirds of total emissions.

Gasoline is the primary source of fuel for the transportation sector.

A relatively small amount of greenhouse gases are due to management and disposal of waste, and are not shown in these figures.

# Grand Marais Climate Action Plan

## GOALS

### A. Primary Goal

#### *Carbon Neutral 2040*

The City of Grand Marais and its residents have made it clear that this community strives to be a leader in the fight against climate change. The impetus for this goal is based on the iMatter Climate Report Card, which gives cities who can achieve net-zero emissions by the year 2040 the grade of an A.

Carbon neutral, or net zero emissions, is a high standard which accounts for, and mitigates, all carbon emissions being emitted in the city. However, the concept does allow for a small amount of emissions to remain in the system if they are offset by a form of carbon capture or sequestration.

### B. Interim Goals

#### *IPCC 2030 Targets*

To avoid the most catastrophic effects of climate change humanity needs to limit global temperature rise to within 1.5°C. To do this, the Intergovernmental Panel on Climate Change has recommended that emissions be reduced to 45% below 2010 levels by 2030. The CAP will use these 2030 targets as a major checkpoint on Grand Marais' progress. See Table 1 below for Grand Marais' 2030 emission targets.

### C. Emissions Source Sub-Goals

#### *Renewable Energy*

Achieve 100% renewable energy for municipal demand by 2030.

Achieve city-wide 100% renewable energy by 2040.

#### *Building Efficiency*

Reduce carbon emissions from existing buildings by 45% of 2010 levels.

Design all new buildings to be Zero Net Energy.

#### *Electric Transportation*

Expand EV adoption to 50% of vehicle stock by 2030.

Reduce vehicle emissions by 45% of 2010 levels.

#### *Zero Waste*

Develop a zero-waste plan for Grand Marais.

Reduce waste by 45% of 2010 levels.

### D.

Table 1: Grand Marais Carbon Emissions Goals for 2030.

Goals	Current Emissions	2010 Emissions	2030 Emission Target
<b>Increase Electricity Generation from Renewable Energy.</b>	16,990	14,979	8,238
<b>Improve Energy Efficiency of Existing Buildings</b>	5,414	5,313	2,922
<b>Design New Buildings to be Zero Net Energy</b>			
<b>Reduce Vehicle Emissions</b>	3,878	3,716	2,044
<b>Reduce Waste Emissions</b>	56	55	30
<b>Total</b>	<b>26,339</b>	<b>24,062</b>	<b>13,234</b>

# Grand Marais Climate Action Plan

## STRATEGIES

### A. The Carbon Emissions Pathway

1. *Efficiency*- The first step in reducing carbon emissions is to become more efficient with how we use energy as a city. The focus for this step will be on improving the built environment as well as building operation and occupancy behavior.
2. *Electrification*- To move away from fossil fuels like propane, fuel oil, and gasoline; the next step in carbon reduction is to electrify heating appliances and gas powered vehicles. After this stage, the building stock should be at its most efficient and the transportation sector should be on its way to being electrified.
3. *Decarbonization*- Shifting electricity generation to low carbon renewable sources with as much local production as possible. After steps 1 and 2, there will be a better understanding of the true electrical demand from these low carbon strategies.

### B. The Policy Pathway

1. *City Operations*- The city will set an example for new policy related to carbon emissions by applying the principles of the policy to its own operations first. This will have spillover effects into the rest of the community such as inspiring copycats in the private sector, streamlining local energy policies, and helping city officials better understand the CAP.
2. *Incentivize*- Connect business owners and residents with financial opportunities that steer them toward energy efficiency and carbon reduction progress.
3. *Require*- Enforce incremental energy portfolio improvements that are consistent with the goals of the city. Instate policies that require participation in carbon reduction projects and that get incrementally more stringent over time. These policies will be well forecasted and result in changes that were first introduced through incentivization.

### C. The Public Involvement Pathway

1. *Educate*- Develop an informed citizenry by reaching out to every Grand Marais citizen and business owner through education seminars, an aggressive outreach program. A 'CAP Portal' will serve as an online database for any and all information related to CAP projects (see below).
2. *Encourage*- Remove barriers to more intensive carbon reduction projects such as finding a solar installer or selecting LED light fixture replacements. Target participants who can benefit the most from efficiency, electrification, and renewable energy projects.
3. *Reward*- Participation and long term investment in energy efficiency and renewable energy projects will be rewarded through progressive policies.

### D. The Timeline

1. *Near-Term (2020-ongoing)*- After the adoption of the Climate Action Plan, the strategic focus will be on efficiency and showing the community that the city can lead by example with its own operations. Additionally, the early phases of CAP implementation lay the groundwork for following strategies like electrification and decarbonization. While programs for energy efficiency are being enacted, plans for electrification and decarbonization will begin to take shape.
2. *Mid-Term (2025-ongoing)*- In the mid-term phase of CAP implementation, strategic focus will shift towards electrification of heating appliances and vehicles. Energy efficiency will remain a priority even as electrification programs are being enacted.
3. *Long-Term (2030-ongoing)*- Long term goals will be primarily focused on achieving 100% renewable energy generation primarily from local sources. City policies will also become more strict requiring energy improvements and carbon reduction from all businesses and residents.

## E. The Sustainability Office

Within Grand Marais there is a desire, and now a plan, to strive for a zero-carbon community. For progress to be made on this plan, a coordinator should be hired who can dedicate time and expertise to the planning and execution of the tactics below.

### *Benefits of a Sustainability Coordinator-*

- A. To act as a liaison between the CAP, the City of Grand Marais, the community, and stakeholder organizations.
- B. To provide a clear and direct path towards achieving the goals of the CAP.
- C. To carry out the planning of all CAP tactics so they do not become a constraint on existing city operations and staff.
- D. To be the point person for all information, communication, outreach, etc. related to the CAP.
- E. To manage the funding and financing of CAP projects including securing grants, rebates, and the like.
- F. To manage participation in programs and initiatives like Minnesota Greensteps.
- G. To report and track the results and progress of CAP programs.

### *The Role of the Position*

- A. To secure funding for the no less than 50% of the positions predetermined salary.
- B. To create a timeline that incorporates Tactics into the three phases from **D** above.
- C. To maintain communication with other city departments, the media, a

### *The Logistics of the Position*

It is suggested that the position of Sustainability Coordinator be housed in its own department called the Sustainability Office and work under the mayor or administrator. This structure gives the office latitude to work with other departments and agencies and imbed sustainability into the decision making of all departments<sup>1</sup>.

### *Funding the Position*

Part of the role of the sustainability coordinator will be to secure funding for the position's salary primarily through grants. The city may also contribute a percentage based on annual energy savings that results directly from the CAP projects the coordinator helps initiate. The hourly engagement of the position will be dependent grant fund availability.

## F. The Climate Action Plan Portal

To aggregate information regarding CAP programs, an online database will be established to house all materials and resources related to carbon reduction projects in Grand Marais.

### *CAP Portal Contents*

- |                                 |  |
|---------------------------------|--|
| Educational Seminar Information | Reviews and Recommendations on Renewable Energy Technology |
| Outreach Program Details        | Information About Changes to City Laws                     |
| Financing Options               |  |
| Incentive Programs              |  |

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<sup>1</sup> City of Rochester Sustainability Office/Coordinator description. [Pages 17-20](#).

# Grand Marais Climate Action Plan

## STRATEGIES MATRIX

STRATEGIES		Energy Efficiency	Electrification	Decarbonization	
		Increase EE of Building Stock	Reduce Reliance on Fossil Fuels	100% Renewable Electricity	
<i>Policy</i>	<b>City Operations</b> Lead by Example	<ul style="list-style-type: none"> <li>-Retrofit city owned buildings to be ZNE.</li> <li>-Replace streetlights with smart LED technology.</li> <li>-Energy benchmarking and disclosure for public buildings.</li> <li>-No idling law for city vehicles.</li> <li>-Develop a city-wide compost collection facility.</li> <li>-Expand city wide recycling program.</li> <li>-City-wide zero waste plan.</li> </ul>	<ul style="list-style-type: none"> <li>-Electrify water and space heating.</li> <li>-Expand EV infrastructure.</li> <li>-Replace all city-owned vehicles with EV.</li> </ul>	<ul style="list-style-type: none"> <li>-Municipal solar installations.</li> <li>-Biodiesel pilot project.</li> <li>-Lease land to a 3<sup>rd</sup> party solar/wind developer.</li> <li>-Partner with SMMPA to develop a large-scale solar PV array at a local site.</li> <li>-Continue to plant trees and conserve greenspace within city limits.</li> </ul>	
	<b>Incentivize</b> Funding/Loans for Carbon Reduction Projects	<ul style="list-style-type: none"> <li>-Commercial/Residential audit and weatherization team.</li> <li>-</li> </ul>	<ul style="list-style-type: none"> <li>-PUC funded loan programs for heating appliance replacement.</li> <li>-Funding for LED replacement.</li> <li>-EV incentives.</li> </ul>	<ul style="list-style-type: none"> <li>-Revolving loan program to provide the upfront costs of solar installation (Solar Advisory Committee).</li> </ul>	
	<b>Require</b> Laws and Ordinances	<ul style="list-style-type: none"> <li>-Require energy benchmarking and disclosure for commercial buildings.</li> <li>-(Assess) Stretch energy code for new and existing buildings.</li> <li>-Implement a lighting system upgrade laws.</li> <li>-Heating appliance efficiency codes.</li> </ul>	<ul style="list-style-type: none"> <li>-Heating appliance replacement codes.</li> </ul>	<ul style="list-style-type: none"> <li>-Solar access and building readiness laws.</li> <li>-Municipal energy to be 100% from renewable sources.</li> </ul>	
	<i>Public Involvement</i>	<b>Educate</b> Resources and Guidance	<ul style="list-style-type: none"> <li>-Education and outreach about commercial/residential efficiency programs.</li> <li>-CAP Portal</li> </ul>	<ul style="list-style-type: none"> <li>-Heating appliance replacement resources.</li> <li>-Public information seminars on the costs and benefits of EV in Grand Marais.</li> <li>-CAP Portal</li> </ul>	<ul style="list-style-type: none"> <li>-Solar Advisory Committee.</li> <li>-CAP Portal.</li> <li>-Solar education and outreach programs.</li> </ul>
		<b>Encourage</b> Remove Barriers to Carbon Reduction Projects	<ul style="list-style-type: none"> <li>-Implement a residential audit and weatherization program.</li> <li>-Encourage commercial energy efficiency programs.</li> <li>-Promote energy benchmarking and disclosure for residential buildings.</li> <li>-Aid in the development of a group purchasing program of commonly used items.</li> </ul>	<ul style="list-style-type: none"> <li>-Aid in the logistics of heating appliance replacement.</li> </ul>	<ul style="list-style-type: none"> <li>-Solar Advisory Committee.</li> </ul>
<b>Reward</b> Benefits for Efficiency and Renewable Energy Improvements		<ul style="list-style-type: none"> <li>-Structure utility rates to value energy efficiency.</li> </ul>	<ul style="list-style-type: none"> <li>-Structure utility rates to value electric heating appliances.</li> </ul>	<ul style="list-style-type: none"> <li>-Structure utility rates to value solar power.</li> <li>-EV-PV charging premiums.</li> </ul>	

# Grand Marais Climate Action Plan

## TACTICS

### Energy Efficiency

#### 1. Increase Energy Efficiency in Existing Buildings.

##### 1.1. Retrofit City-Owned Buildings to be Zero Net Energy (ZNE)<sup>2</sup>.

###### 1.1.1. Develop a performance standard for ZNE city-owned buildings.

- i. ZNE buildings should have a very high energy performance standard **and** use very little energy. Energy that is used should come primarily from renewable sources.
- ii. Establish an Energy Use Intensity (EUI) expressed in kBtu per square foot per year that meets the city's standard for an ZNE building.

###### 1.1.2. Create a timeline for retrofitting city-owned buildings.

- i. Set a target date for city-owned buildings to be nearly net-zero.
- ii. Establish intermediate targets for building efficiency.
- iii. Schedule high impact retrofits around already scheduled maintenance and construction of buildings.

###### 1.1.3. Audit all city-owned buildings.

- i. Measure the energy performance using EnergyStar® Portfolio Manager and use NBI's FirstView® Software Tool to establish capital and operation opportunities before the audit process.
- ii. Assess areas with the most potential for improvement with a walkthrough audit. This includes focus on reducing building load with envelope sealing, lighting, HVAC improvement, assessment of heating appliances, as well as on-site renewable energy potential, and behavioral and buildings operations assessment.

###### 1.1.4. The design process for ZNE buildings.

- i. Select a design and construction team that is committed to the success of the ZNE project. Add ZNE goal in Request for Proposals and or include an Owners Project Requirement (OPR) to define the project goals. Consider include EUI target in contractual documents.
- ii. Organize a charrette where all stakeholders can review priorities and share ideas for the project goals to build consensus early in the process. Include building operators, occupants and tenants in this process to optimize building energy performance.
- iii. Design and construction should take the ZNE building goals into account early in the process, so they may be easily integrated into the building as efficiently as possible.

###### 1.1.5. Monitor operation and track the building performance.

- i. Use EnergyStar® Portfolio Manager to log energy consumption and production.
- ii. Review building performance data and make necessary calibrations to ensure the performance meets the ZNE goals.
- iii. Share and make public the process for designing, funding, retrofitting, and operating ZNE buildings as well as their performance as a reference for the rest of the community<sup>3</sup>.

##### 1.2. Replace streetlight and other municipal outdoor lighting with LEDs and smart lighting technologies<sup>4</sup>.

###### 1.2.1. Audit city operated outdoor lighting and formulate a cost-benefit report for installing LED streetlights.

###### 1.2.2. Use dimming and scheduling capabilities to optimize outdoor lighting usage.

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<sup>2</sup> [Zero Net Energy Project Guide](#) for designing ZNE Buildings. [Energy Savings Performance Contracting](#) can fund these projects without tapping into capital.

<sup>3</sup> The City of Santa Monica published the [Zero Net Energy Guide for New Construction](#) for their residents as a resource for building ZNE homes. Additionally, Zero Net Energy's [Action Paths for Jurisdictions](#) shows that municipal building leadership is important for establishing a foothold into implementing deep energy retrofits into the rest of the building stock.

<sup>4</sup> A summary of [smart street lighting](#) best practices.

1.3. Implement a residential energy efficiency and weatherization program.

1.3.1. Partner with CCLEP, CERTs, and the University of Minnesota or an Ecolibrium3-like program<sup>5</sup> to establish a program like the Green Iowa AmeriCorps Program<sup>6</sup> to address residential energy efficiency that is accessible to all Grand Marais residents.

- i. The team will be trained to carry out building envelope tests, infrared thermal scanning, light weatherization projects, LED light bulb replacement, building operations and behavioral suggestions as well as track carbon, energy and financial savings.

1.3.2. Organize “Weatherization Blitzes” by procuring sign-ups at outreach events and cold calling on residents.

1.3.3. Use grant, state, and city funding to implement an income based payment system to allow low income residents to participate at little to no cost.

1.4. Encourage commercial energy audits and weatherizations done through SMMPA’s energy efficiency program or another program- like Clear Result<sup>7</sup>.

1.4.1. Offer financing to businesses who save energy by carrying out specific energy efficiency projects.

- i. Financing option could include: AEOA Business Retrofit Program, EDA’s Storefront Revitalization Program, or use an On-Bill Loan<sup>8</sup> through the Grand Marais Public Utility Commission. Repayment of loans to be part of monthly utility bill.
- ii. To emphasize energy efficiency projects that have a direct effect on carbon emissions- lenders should predetermine the types of projects they are willing fund.

1.4.2. Organize education and outreach seminars to promote rebates and tax credit programs available for energy efficiency projects<sup>9</sup>.

1.4.3. Partner with CCLEP to organize education seminars about building operations and behavioral changes that increase energy efficiency in the Zero Net Energy model.

2. Accelerate Education and Outreach About Energy Efficiency.

2.1. Boost public education and outreach about residential energy efficiency best practices.

2.1.1. Partner with local organizations like CCLEP, North House Folk School, local churches, etc. to organize DIY home energy weatherization, building operation and behavioral changes seminars.

2.1.2. Using the CAP Portal, compile a list DIY home energy projects, resource materials, and contractors who specialize in various energy efficiency projects.

2.2. Boost public education and outreach about commercial energy efficiency.

2.2.1. Partner with local organizations like SMMPA’s Energy Efficiency Program, Clear Result, etc. to establish “Best Practices for Commercial Businesses” resources in the Zero Net Energy Model in the CAP Portal.

2.2.2. Use a focused outreach program to contact all local business to encourage participation in energy efficiency programs.

3. Expand Energy benchmarking and Disclosure.

3.1. Require energy benchmarking and disclosure for all public and commercial buildings<sup>10</sup>.

3.1.1. Start with public buildings to lead by example. Then establish parameters for engaging buildings in the private sector on an incremental yearly basis that get more stringent over time<sup>11</sup>.

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<sup>5</sup> [Ecolubrium3](#), a Duluth non-profit whose mission is to improve energy efficiency and renewable energy.

<sup>6</sup> [Green Iowa AmeriCorps](#) is an innovative model program where members are trained as energy auditors and address conservation and sustainable energy usage Iowa communities.

<sup>7</sup> Clear Result’s [Community-Based Distribution Program](#) makes commercial energy efficiency accessible to all businesses.

<sup>8</sup> [On-Bill Financing](#), U.S. Dept. of Energy.

<sup>9</sup> [DSIRE](#), an online database to energy efficiency and renewable energy project rebate and tax information.

<sup>10</sup> State and Local Energy Efficiency Action Network (SEE Action) [Energy Performance Benchmarking and Disclosure Policies](#) for Public and Commercial Buildings (begins on p14)- facilitated by the US DOE.

<sup>11</sup> SEE Action [Policy Design Guide](#) for State and Local Governments.

- 3.1.2. Contribute energy usage data to an online database like EnergyStar's® Portfolio Manager or the DOE's Building Performance Database to get an annual rating.
  - i. Annual rating should include EnergyStar® rating, energy use/square foot/year, annual CO<sub>2</sub> emissions, and basic descriptive data.
- 3.1.3. Optimize benchmarking through a variety of approaches<sup>12</sup>. For example, comparing a building's performance against itself over time or against similar buildings over time, etc.
- 3.1.4. Use this program as a feed in for commercial and residential energy audits and weatherization program mentioned in sections 1 and 2.
- 3.1.5. To maximize compliance, reach out to commercial building stakeholders about the benefits of benchmarking and offer manpower to facilitate data contribution.

3.2. Promote energy benchmarking and disclosure for residential buildings.

- 3.2.1. Using the Building Performance Database (BPD) or EnergyStar's® Portfolio Manager, encourage residents to contribute their home energy data.
- 3.2.2. Take similar steps to 3.1 to establish a rating system and benchmarking approach to residential buildings.
- 3.2.3. To encourage maximum participation, reach out to residential building stakeholders in much the same method as 3.1.5.

4. Establish Progressive Energy Codes for Existing Buildings.

4.1. Assess the cost-benefit of a stretch energy code for existing buildings<sup>13</sup>.

- 4.1.1. Use the energy efficiency of two prototype residential buildings to analyze the viability of stretch energy codes.
  - i. Model one building that follows Minnesota Residential Energy Efficiency Standards<sup>14</sup>, the other that is performing at a ZNE level to determine the likely outcome of enforcing a stretch energy code.
- 4.1.2. If an energy code is favorable, consider the process to implementing it.
  - i. To prevent market disruptions: focus on tiered incremental phasing of these energy codes; develop a financing method that helps residents and business owners with upfront capital; and work with real estate markets, contractors, residents and building owners upfront to avoid resistance.
- 4.1.3. Write the code so that over time it becomes more stringent and moves the building stock towards ZNE.

4.2. Implement a lighting system upgrade law<sup>15</sup>.

- 4.2.1. Define parameters where all lights that are used daily for an extended period are required to be of a certain efficiency.
- 4.2.2. Establish a deadline for the required upgrade. (e.g. by 2025 all building lights not exempt from the requirement must be improved to a determined efficiency.)
- 4.2.3. Offer a rebate on upgrade products to those who complete the upgrade well in advance of the deadline.
- 4.2.4. Charge a recurring penalty to those noncompliant with the new lighting system code.

4.3. Introduce heating appliance efficiency codes.

- 4.3.1. Through the Grand Marais Public Utility, provide off-peak and interruptible options for innovative appliances like heat pump electric hot water heaters and thermal storage heaters<sup>16</sup>.

<sup>12</sup> See page 2 of SEE Action's [Energy Benchmarking, Rating, and Disclosure for Local Governments](#) for more information on the benefits of energy benchmarking.

<sup>13</sup> The city of Santa Monica conducted a [Cost Effectiveness Study](#) to establish the benefit of stretching their city energy code above the standard set by the California Energy Code.

<sup>14</sup> [Commercial](#) and [Residential](#) Energy Efficiency from the 2015 Minnesota Energy Code.

<sup>15</sup> New York City [lighting upgrade law](#).

<sup>16</sup> Arrowhead Electric Cooperative's incentives for heating appliance electrification: [Electric Thermal Storage](#), [Interruptible HWS](#).

4.3.2. Incentivize, then require high efficiency electrified heating appliances upon previous fixture burnout/replacement.

5. Establish Progressive Energy Codes for New Buildings.

5.1. Assess the cost-benefit of a stretch energy code for new construction.

5.1.1. Use the same analysis methods as in part 4.1.

5.1.2. Establish the optimal stretch above the current Minnesota Energy Efficiency Code based on the cost benefit analysis for both commercial and residential buildings.

5.1.3. Establish an incremental timeline for phasing in optimal stretch energy codes for both commercial and residential buildings.

## Electrification

6. Electrify hot water and space heating appliances.

6.1. Gradually electrify hot water and space heating in all city buildings<sup>17</sup>.

6.1.1. Based on the assessment in 1.1.3.ii, determine a schedule by which hot water and space heating appliances will be replaced.

6.1.2. As appliances reach the end of their usable life, use highly efficient replacements that keep the building on track with the 1.1 tactic of converting all city buildings to ZNE.

6.2. Implement a program to encourage and incentivize the electrification of hot water and space heating systems in residential and commercial buildings.

6.2.1. Provide information to business owners and residents about their options for highly efficient replacement appliances through the city's own replacement program.

i. This should include many options for different size and types of buildings and their hot water and space heating needs; as well as projected 1, 5, and 10 year costs for their replacements.

6.2.2. Through the Grand Marais Public Utility Commission, establish a heating appliance replacement low interest loan program.

6.2.3. Consider the cost benefit of a group purchase of heating appliances to reduce the cost of delivery and installation.

6.3. Introduce heating appliance electrification-based efficiency codes.

6.3.1. Through the Grand Marais Public Utility, provide off-peak and interruptible options for innovative appliances like heat pump electric hot water heaters and thermal storage heaters<sup>18</sup>.

6.3.2. Offer a window of time when heating appliance replacement is incentivized. After the window closes, require high efficiency electrified heating appliances upon next burnout/replacement.

6.4. Identify potential problems to increased demand for electricity.

6.4.1. Conduct an engineering analysis of electrical infrastructure to understand if it can handle the increased demand of electricity.

7. Reduce reliance on fossil fueled vehicles.

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<sup>17</sup> Heating appliance replacement information from [MN Dept. of Commerce](#). Fuel switching will add demand on the electrical load, the [following paper](#): *Implications of electrified residential space heating in California* addresses this issue as a model how much additional load there will be in California.

<sup>18</sup> Arrowhead Electric Cooperative's incentives for heating appliance electrification: [Electric Thermal Storage](#), [Interruptible HWS](#).

- 7.1. Gradually replace all city owned fossil-fuel vehicles with fully or partially run electric vehicles and alternative fuel vehicles<sup>19</sup>.
  - 7.1.1. Improve the efficiency of the city fleet operations. Use baseline fuel usage data and data tracking software<sup>20</sup> to set goals for improving operational efficiency and vehicle utilization of the city fleet.
  - 7.1.2. Build EV infrastructure for city vehicles. Develop and build a pilot project<sup>21</sup> to better understand the costs and logistics of EV charging for city fleet use. Identify potential problems, such as electrical upgrades, maintenance, and repair of new infrastructure.
  - 7.1.3. Select an ideal default green vehicle equivalent for each type of city vehicle based on its use. As they reach the end of their useable life, replace fossil fuel vehicles with equivalent EV alternatives.
- 7.2. Expand electric vehicle charging infrastructure and incentives<sup>22</sup>.
  - 7.2.1. Survey city residents to estimate how many EV users are in the city, and how many are projected in the next decade. Use the results to establish a target for the number of EV charging stations to add to Grand Marais.
  - 7.2.2. Offer incentives to EV users such as allowing them access to prime parking spaces and free daytime charging.
  - 7.2.3. Partner with local business who are willing to install EV charging stations on outside their storefronts for patron use; and offer incentives to local businesses who promote the use of EV by their employees.
- 7.3. Education Programs on vehicle efficiency and EV.
  - 7.3.1. Partner with CCLEP and local organization to offer informational sessions of the cost and benefits of transitioning to electric vehicles in Grand Marais.
- 7.4. Instate policies that reduce emissions from internal combustion engines.
  - 7.4.1. Instate a no idling policy for city vehicles<sup>23</sup>.

## Decarbonization

8. Expand Locally Generated Solar Electricity.
  - 8.1. Install solar photovoltaics on all municipal sites with solar potential.
    - 8.1.1. Assess all policies concerning local, renewable energy generation that is city is obliged to follow to determine how much solar can be installed.
    - 8.1.2. Conduct solar site assessments on all municipal buildings and sites to determine the optimal location for solar projects.
    - 8.1.3. Use a solar specific RFP to solicit bids from solar developers.
    - 8.1.4. Using the Guaranteed Energy Savings Program<sup>24</sup> (or another option such as a tax-exempt bond or performance contracting) to finance all possible municipal solar projects.
    - 8.1.5. Monitor the system's power generation, compare with expected results and make this information public in the CAP Portal.
  - 8.2. Partner with SMMPA to develop a large-scale solar PV array at a local site.

<sup>19</sup> US Dept. of Energy's [Plug In Electric Vehicle Handbook](#) outlines how cities can transition their fleets over to lower carbon alternatives. The City of Seattle Washington has a [Green Fleet Action Plan](#) which shows their ongoing transition from internal combustion engines to electric and biofuel vehicles.

<sup>20</sup> An example of [fleet management software](#) that tracks metrics to improve efficiency.

<sup>21</sup> A guide developed by Fleetcarma to launching an [electric vehicle pilot program](#).

<sup>22</sup> The [City of Oslo, Norway](#) is aiming to be the EV capital of Europe. In 2008 they installed 400 EV charging stations. 4 years later they review what they have learned from the process of aggressively expanding the EV infrastructure.

<sup>23</sup> An example of a [Public Vehicle Idling Policy](#).

<sup>24</sup> [Guaranteed Energy Savings Program \(GESp\)](#)

- 8.2.1. Establish a team of PUC and SMMPA members to plan the project.
- 8.3. Contract with a 3<sup>rd</sup> party solar or wind developer to establish a large-scale project on city land.
  - 8.3.1. Ask for RFP from a 3<sup>rd</sup> party solar developer willing to negotiate leasing the land for the project from the city to the 3<sup>rd</sup> party with leasing of the use of the solar panels for electricity from the 3<sup>rd</sup> party to the city.
  - 8.3.2. Enter into a Power Purchase Agreement (PPA) with the 3<sup>rd</sup> party developer to produce the remaining electricity demand from city operation not from renewable sources. (i.e. Help the city operation become 100% renewable electricity.)
- 8.4. Establish a Solar Advisory Committee to build a sustainable solar market in Grand Marais<sup>25</sup>.
  - 8.4.1. Invite local advocacy groups and other stakeholders to a planning process meeting.
  - 8.4.2. Survey residents and business owners to identify barriers to installing solar.
  - 8.4.3. Conduct an installation baseline survey of all solar projects that exist in the area to ascertain an average cost of installing solar.
  - 8.4.4. Conduct a study to determine the viability of a PUC or SMMPA owned community solar garden<sup>26</sup> for renters and those unable to install solar on their home or business.
- 8.5. Aggressively publicize information about the benefits of going solar as well as financing, installing, and maintaining commercial and residential solar.
  - 8.5.1. Collect all pertinent financial information regarding solar installations in a publicly available CAP Portal.
    - i. Include information regarding rebates, property and sales tax incentives, feed-in tariffs, property accessed clean energy financing (PACE), low interest solar loans, group purchasing, and information from 8.4.3. regarding installation baseline data.
  - 8.5.2. Hold frequent informational and education seminars, public forums, targeted outreach events using solar mapping tools<sup>27</sup>, demonstration projects, advertising campaigns, etc. to disseminate information about solar installation.
    - i. Include information regarding solar site assessments, financing, installation, payback, maintenance, lifespan, output, etc.
    - ii. Find “ready to go” sites and actively recruit them to partake in solar installation projects.
    - iii. Operate a customer assistance program to help home and business owners learn the ins and outs of solar purchasing and installation.
- 8.6. Update Local Renewable Energy Policies.
  - 8.6.1. Establish solar access rights laws by creating solar access permits and solar easements to protect access to sunlight on a property<sup>28</sup>.
  - 8.6.2. Encourage (through 2029), then require (2030 and beyond) homebuilders and developers to design and build solar-ready homes.
    - i. Create Solar-Ready guidelines<sup>29</sup> and make them available through the CAP Portal.
  - 8.6.3. Structure utility rates so solar is the highest valued form of electricity.
    - i. Implement a rate structure that highly values solar electricity to decrease the payback time for solar projects.

<sup>25</sup> A guide for local government to establish a solar market in their community including links to other communities as case studies: [Solar Powering Your Community](#).

<sup>26</sup> CERTs resources on [community solar gardens](#).

<sup>27</sup> CERTs [Solar Map](#).

<sup>28</sup> Minnesota [Statute 500.30 Subdivision 1](#). Solar Easements.

<sup>29</sup> [Solar Ready Building Design Guidelines](#), from The Minneapolis Saint Paul [Solar in the Cities Initiative](#).

- ii. In 2030 and beyond, set up rate tiers so customers pay more for electricity the more they use.
- iii. Reward strategic EV-PV charging scenarios<sup>30</sup> by offering a premium on any electricity bought or sold from/to the PUC on the electrical distribution system.

8.6.4. Consult with the Citizen’s Climate Lobby on the viability of carbon fee in the city.

9. Expand Other Forms of Locally Generated Renewable Energy.

- 9.1. Aid in the establishment of a biofuels pilot project that refines forest slash and wood mill leftovers into diesel fuel<sup>31</sup>.
  - 9.1.1. Conduct a study to determine the performance of biodiesel in cold climates.
  - 9.1.2. Partner with a green technologies firm for an investment into a local business that is willing to house and operate the pilot project. Additionally, partner with logging and wood mill businesses that are willing to sell or donate slash to the pilot project.
  - 9.1.3. Partner with government entities, businesses, organizations, and private citizens to sell the refined biodiesel at a price competitive with regular diesel fuel.
  - 9.1.4. Use the findings from the pilot project to determine if a larger biofuels operation would be feasible in Grand Marais.
  - 9.1.5. Expand the use and infrastructure of sustainable, locally sourced biofuels in certain vehicles.
- 9.2. Develop a plan for a large scale wind turbine on Sawtooth Mountain Bluff.
  - 9.2.1. Assess the wind resource on the Sawtooth Mountain Bluff.
  - 9.2.2. Hold a stakeholder meeting to hear concerns for a large wind turbine near a major bird migration corridor.
  - 9.2.3. Find and negotiate with SMMPA or a third party investor about financing, installing, and maintaining the turbine.
  - 9.2.4. Collect data on the turbine’s performance, as well as how it affects bird migration and the city skyline.

10. Tactics for Reducing Waste and Optimizing Land Use.

- 10.1. Develop city-wide organic waste collection and composting infrastructure.
  - 10.1.1. Designate a centrally located, easily accessible site for a city owned and operated compost repository.
    - i. Hire a part-time staff person that will be overseen by the Sustainability Office to manage the compost facility and ensure that it produces quality garden fertilizer.
    - ii. Sell the broken down organic waste product as fertilizer.
  - 10.1.2. Create an education and outreach campaign to help the community embrace the composting program.
- 10.2. Expand city recycling to include more plastics and obscure items (ex: dental hygiene recycling program).
  - 10.2.1. Consult with the Nordic Nature Group on further action.
- 10.3. Aid in the development of group/bulk purchasing of commonly used commercial products.
  - 10.3.1. Survey local businesses to ascertain interest for group purchasing plan.
  - 10.3.2. Gather stakeholders and facilitate a meeting for group purchasing plan.
  - 10.3.3. Designate a community champion to coordinate the expansion of a group/bulk purchase program.

10.4. Develop a city wide Zero-Waste Plan<sup>32</sup>.

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<sup>30</sup> Strategic Charging [EV-PV](#) summary.

<sup>31</sup> A company like [Advanced Biorefinery](#) sells products that help turn [forest slash and wood mill leftovers into biofuels](#).

- 10.4.1. Zero-Waste City Operations.
  - 10.4.2. Incentives for zero-waste businesses and organizations.
  - 10.4.3. Waste reduction requirements that get incrementally stringent over time.
- 10.5. Continue to plant trees and conserve green space within city limits.
- 10.5.1. Conduct a tree inventory to determine how much carbon sequestration the city's trees are currently capable of.
- 10.6. Support the city's stormwater management plan.
- 10.6.1. Consider the viability of installing generators in the drainage system to capture energy of moving water.

## **Grand Marais Climate Action Plan REPORTING**

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<sup>32</sup> [Zero-Waste Plan](#) for the Island of Guam.

**A. Annual Climate Action Plan Progress Report**

An annual report, presented to the city council by the Sustainability Coordinator, will be created using up-to-date carbon emissions data. The report will summarize ongoing tactics and their impact on carbon emissions as well as detail tactics that are still in the development phase.

*Benefits of Annual Reporting*

- Highlight accomplishments and find areas to improve on.
- Maintain transparency with respect to how tactics are affecting carbon emission levels.
- Engage the public on ongoing and upcoming tactics.

**B. Goals and Tactics Assessment Checkpoints**

Carbon emission data and the effectiveness of tactics will become more accurate the longer they are in place. As more data is gathered and more tactics are enacted, the path towards carbon neutrality will become clearer. Based on the findings of the annual report- adjustments to goals, strategies, and tactics will be made to most effectively achieve the city’s carbon reduction goals.

**C. Reporting Flow Chart**



<i>Financing Mechanisms</i>	<i>Mode</i>	<i>Examples</i>	<i>Strengths</i>	<i>Weaknesses</i>
<i>Traditional Financing</i>	Municipal bonds and bank loans			
<i>Energy Performance Contracts (EPCOs)</i>	Energy service companies fund the initial project, energy savings pays it off over time.			
<i>Third-Party Ownership</i>	3 <sup>rd</sup> Party invests in and owns the project and receives payment from the primary entity.	Climate Bonds Initiative		
<i>Green Banks</i>	Institutions dedicated to financing RE and EE.	Energies POSIT'IF, Green Bank Network		
<i>On-Bill</i>	A loan from a utility that is paid back via regular monthly payments on normal bill.			
<i>City Funded</i>	City revenue from targeted programs to fund new investments.	Almada Less Carbon Fund		
<i>Energy Loans</i>	A loan program targeted at RE and EE projects. Revolving loan structure.	Amsterdam Investment Fund		
<i>Subsidized/Blended Loans</i>	Low or no interest loans created by the city and a bank.	Brussels Green Loan Scheme		
<i>Public-Private Partnership (PPP)</i>	City grants a private entity responsibility for investment in infrastructure.			
<i>Credit Enhancement</i>	City provides assurance to private lender to cover losses. As a result, lenders provide credit.			
<i>Property Assessed Clean Energy (PACE)</i>	Financing tied to property that can be transferred to new building owner.			
<i>Soft Loans</i>	A loan program created to allow RE and EE improvements with low interest rates.	Delft Energy Savings Fund		

*Funding Strategy*

*City Operations*

*PUC Based Projects*

*Residential Projects*

*Commercial Projects*

# City of Grand Marais

## MEMO

TO: Public Utilities Commissioners  
FROM: Michael J. Roth, City Administrator  
DATE: February 8, 2019  
SUBJECT: Agenda Notes

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### **PUC Opening, Chairperson**

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Commissioner Hansen's term expired in December. An earlier candidate expressing interest will not be able to serve. The City Council is currently searching for another person interested in the Commission opening. Hansen served as the chairperson, so the Commission will need to select another.

### **Climate Action Plan Update**

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Shane Steele, CAP coordinator for the City, will be at the meeting to provide an update and review of the draft Climate action plan. The Commission can provide feedback and discuss their role in the draft plan.

### **Long Range Planning for Energy Transition**

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Commissioner Wilkes requested that the PUC discuss long-range planning for energy transition, including the idea of a rate hike to fund renewable energy.

### **Renewable Energy Projects**

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Wilkes also requested that the PUC discuss the next potential renewable energy project for the PUC. The Library has been discussed.

### **Energy Innovation and Carbon Dividend Act**

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Wilkes is asking the PUC and City to consider passing a resolution supporting the Energy Innovation and Carbon Dividend Act. Look [here](#) and [here](#) for more information.



Haden Hinchman <cityhall@grandmarais.city>

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## Monthly Update

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**Butcher, Keith** <kr.butcher@smmpa.org>  
To: \_DL MEM North <memnorth@smmpa.org>  
Cc: \_DL SMP Member Support <smpmem@smmpa.org>

Wed, Dec 12, 2018 at 1:06 PM

Good Afternoon,

Below is an update on my recent activities. Please let me know if you have any questions.

Thanks,  
Keith

### 1.) Grand Marais

- a. Dropped off Holiday LED materials at Buck's and the Home Center
- b. Working with Jim Alcorn on a lighting retrofit for the Grand Marais Congregation of Jehovah's Witnesses.
- c. Helped with an article on North Shore Hospital for SMMPA's newsletter.
- d. Helping Ben (contractor) on an HVAC proposal for Grand Marais State Bank.
- e. Helped a residential customer with questions regarding furnace rebates.
- f. Working on a rebate for Sawtooth Clinic (2019)
  - i. 9.20 kW; 64,688 kWh; \$10,080

### 2.) North Branch

- a. Finishing up an LED rebate for Branch Manufacturing (2019).
  - i. 33.08 kW; 174,896 kWh; \$16,470
- b. Completing an LED rebate for Budget Host Inn (2019)
  - i. 0.09 kW; 7,549 kWh; \$1,433.50
- c. Working with Gary (Hair Design) on a TLED retrofit
- d. Furnace Fan Motor rebate issued to North Branch Area Chamber of Commerce
  - i. 0.18 kW; 248 kWh; \$50
- e. Rebate for LED wall packs issued to North Branch Water and Light
  - i. 0 kW; 5,130 kWh; \$239.99
- f. Dropped off Holiday LED materials at Main Street Ace and Shopko

g. Working with Todd Christopherson (Flashing By Design) on a new building that is under construction. Talked to Joel (Vetter's Electric) on different LED options and rebates.

h. Helping schedule a compressed air leak post-inspection for CHP

### 3.) Princeton

a. Working with Brad (Coborn's) on an LED retrofit for both overhead lights and refrigerated display cases. Brad and I talked on 10/8. They have two phases complete and hope to have the third phase completed in the next 2 to 3 weeks. I reached out to Brad on 12/6 for a status report.

b. Helping with a potential custom rebate application for a new walk-in freezer for the school district.

c. LED rebate issued to Minuteman Press.

i. 0.77 kW; 3,824 kWh; \$497.09

d. Helping Federated Co-op evaluate LED options.

e. Working with Kat (Princeton HRA) on a low-income LED retrofit. Project will be split into two parts

i. 2018

1. 0.04 kW; 363 kWh; \$2,000.76

ii. 2019

1. 0.04 kW; 362 kWh; \$2,000.76

f. Reached out to my contact on the Aldi's project to get final information for a rebate. The Aldi's grand opening was held on 12/6. Talked to Leigha (Contractor) on 12/12. She will be sending me invoices and spec sheets.

g. Reached out to the contact for a proposed retrofit at the Holiday Gas Station on 12/6. I asked for an update. Waiting for invoices (12/10).

h. Reached out to the contact for a proposed retrofit at the Speedway SuperAmerica Gas Station on 12/6. I asked for an update. Waiting for invoices (12/7).

i. Contacted contractor that proposed an LED rebate to Plastic Products. Decision has been delayed until 2019.

j. Working with Paul (Elim) on an LED retrofit rebate.

i. Estimated: 0.78 kW; 5,689 kWh; \$432.05

k. Working with Justin (Casey's General Store) on an LED retrofit rebate application.

i. Estimated: 1.59 kW; 47,011 kWh; \$3,376

### 4.) Mora

a. Working on a rebate for the First Light Hospital addition. Estimated completion is mid-2019.

b. Working with Tim Joy on an LED retrofit project. Estimated completion is late 2018 or early 2019.

c. Working with Jeremy on an LED rebate for the city.

d. Introduced myself to the new Chamber Executive Director. Meeting planned for January.

e. Working on LED rebate for Kanabec County

i. Courthouse (2019)

1. 8.76 kW; 48,505 kWh; \$3,310.93

ii. Jail (2019)

1. 5.33 kW; 40,795 kWh; \$1,261.25

- f. Working with Ken (K&R Meats) on an LED sign retrofit

#### 5.) Litchfield

- a. Working on several rebates for FDA.
  - i. Lighting post-inspection conducted on 10/23 for new Dryer Building.
    - 1. Estimated: 76.79 kW; 592,311 kWh; \$68,038
  - ii. Lighting for Boiler Addition (waiting for final blueprints for verification)
    - 1. Estimated: 3.42 kW; 31,127 kWh; \$6,042
  - iii. 2018 VSDs (waiting for final invoices)
    - 1. Estimated: 0 kW; 490,655 kWh; \$22,079.47
- b. Helping Joe Kloss (Anderson Chemical) on an LED proposal that he received from a contractor.
- c. Helping the post office with an LED retrofit.
- d. LED rebate issued to Davis Motors
  - i. 4.09 kW; 20,284 kWh; \$1,630.
- e. Working with Zana (Retrofit Companies) on an LED proposal for Ecumen. Estimated completion is January of 2019.
- f. Working on a rebate for Lincoln Apartments (2019). Qualifies as a low-income project.
  - i. Budget = \$5,885
- g. LED retrofit rebate issued to Doosan. Inspection conducted on 12/11.
  - i. 33.44 kW; 165,035 kWh; \$8,785.80
- h. LED retrofit rebate issued to DBE Insurance
  - i. 0.32 kW; 1,750 kWh; \$211.50
- i. Working on LED rebate for Meeker Memorial
  - i. 2.24 kW; 21,085 kWh; \$1,608.09

#### 6.) Redwood Falls

- a. LED rebate issued to Casey's General Store
  - i. 1.58 kW; 46,132 kWh; \$3,164
- b. Dropped off Holiday LED materials at Runnings.
- c. Working on an LED rebate for Clement's Lumber
  - i. Estimated: 0.22 kW; 1,581 kWh; \$151

#### 7.) General

- a. Started survey work on Grand Marais
- b. Helping with this year's Be Bright and Holiday LED campaigns
- c. Spent a day in Mora and a day in Princeton with Scott Passentino to get pictures of the community and customers.



## Monthly Update

**Butcher, Keith** <kr.butcher@smmpa.org>  
 To: \_DL MEM North <memnorth@smmpa.org>  
 Cc: \_DL SMP Member Support <smpmem@smmpa.org>

Wed, Jan 9, 2019 at 9:35 AM

Good Morning All,

Here is a summary of my recent activities. With trying to wrap up 2018 and launch our 2019 programs there has been a lot of activity. Please let me know if you have any questions or comments.

Thanks,  
 Keith

### 1.) Grand Marais

- a. Dropped off Holiday LED materials at Buck's and the Home Center
- b. Working with Jim Alcorn on a lighting retrofit for the Grand Marais Congregation of Jehovah's Witnesses.
- c. Helped with an article on North Shore Hospital for SMMPA's newsletter.
- d. Helping Ben (contractor) on an HVAC proposal for Grand Marais State Bank.
- e. Helped a residential customer with questions regarding furnace rebates.
- f. Rebate issued to Sawtooth Clinic (2019)
  - i. 9.20 kW; 64,688 kWh; \$10,080

### 2.) North Branch

- a. LED rebate issued to Branch Manufacturing (2019).
  - i. 33.08 kW; 174,896 kWh; \$16,470
- b. LED rebate issued to Budget Host Inn (2019)
  - i. 0.09 kW; 7,549 kWh; \$1,433.50
- c. LED rebates issued to Associated Bank (2019)
  - i. 5.94 kW; 33,394 kWh; \$5,219.76
- d. Helping schedule a compressed air leak post-inspection for CHP
- e. Helped with some residential rebate applications.
- f. Working with Rick on an LED streetlight replacement plan for 2019.
- g. Stopped by Sunrise Flour Mill (newer customer) to introduce myself and our rebate offerings. They are setting up their facility and were very appreciative for the information. They will share it with their contractors.

### 3.) Princeton

- a. Rebates issued to Coborn's
  - i. LEDs in refrigerated display cases (2018)
    1. 6.35 kW; 42,810 kWh; \$3,520
  - ii. TLEDs (2019)
    1. 34.87 kW; 256,034 kWh; \$12,838.36
- b. LED rebate issued to Minuteman Press.
  - i. 0.77 kW; 3,824 kWh; \$497.09
- c. Helping Federated Co-op evaluate LED options.
- d. Working with Kat (Princeton HRA) on a low-income LED retrofit. Project will be split into two parts
  - i. 2018
    1. 0.04 kW; 363 kWh; \$2,000.76
  - ii. 2019
    1. 0.04 kW; 362 kWh; \$2,000.76
- e. Reached out to my contact on the Aldi's project to get final information for a rebate. The Aldi's grand opening was held on 12/6. Talked to Leigha (Contractor) on 12/12. She will be sending me invoices and spec sheets. Conference call held on 1/2.
- f. Reached out to the contact for a proposed retrofit at the Holiday Gas Station on 12/6. I asked for an update. Waiting for invoices (12/10).
- g. Reached out to the contact for a proposed retrofit at the Speedway SuperAmerica Gas Station on 12/6. I asked for an update. Waiting for invoices (12/7).
- h. Working with a contractor on an LED retrofit at Plastic Products. Project has been delayed indefinitely.
- i. LED retrofit rebate issued to Elim (2019)

- i. 0.78 kW; 5,689 kWh; \$432.05
  - j. LED retrofit rebate application issued to Casey's (2019).
    - i. 1.59 kW; 47,011 kWh; \$3,376
  - k. Working with Barry on an LED retrofit at the Depot. Lighting study conducted by Rummel Design (Minnesota Historical Society). I provided comments to Barry on 1/9.
  - l. Working with Raj (Rum River Motel) on his 2018 rebates.
- 4.) Mora
  - a. Working on a rebate for the First Light Hospital addition. Estimated completion is mid-2019.
  - b. Working with Tim Joy on an LED retrofit project. Estimated completion is late 2018 or early 2019.
  - c. Working with Jeremy on an LED rebate for the city.
  - d. Introduced myself to the new Chamber Executive Director. Meeting planned for January.
  - e. LED rebates issued to Kanabec County
    - i. Courthouse (2019)
      - 1. 8.76 kW; 48,505 kWh; \$3,310.93
    - ii. Jail (2019)
      - 1. 5.33 kW; 40,795 kWh; \$1,261.25
  - f. Working with Ken (K&R Meats) on an LED sign retrofit
  - g. LED rebate approved for Olympak (2019)
    - i. 7.37 kW; 41,380 kWh; \$1,950
  - h. LED rebate issued to First World Travel.
    - i. 0.40 kW; 2,236 kWh; \$154
- 5.) Litchfield
  - a. Several rebates issue for FDA.
    - i. Lighting post-inspection conducted on 10/23 for new Dryer Building (2018).
      - 1. 61.76 kW; 543,040 kWh; \$68,038
    - ii. Lighting for Boiler Addition (2018)
      - 1. 3.42 kW; 43,971 kWh; \$6,042
    - iii. VSDs (2018)
      - 1. 0 kW; 490,655 kWh; \$22,079.47
    - iv. Compressed Air Leak Correction (2019)
      - 1. 21 kW; 217,666 kWh; \$2,700
  - b. Helping Joe Kloss (Anderson Chemical) on an LED proposal that he received from a contractor.
  - c. Helping the post office with an LED retrofit.
  - d. LED rebate issued to Davis Motors
    - i. 4.09 kW; 20,284 kWh; \$1,630.
  - e. Working with Zana (Retrofit Companies) on an LED proposal for Ecumen. Estimated completion is January of 2019.
  - f. Working on a rebate for Lincoln Apartments (2019). Qualifies as a low-income project.
    - i. Budget = \$5,885
  - g. LED retrofit rebate issued to Doosan. Inspection conducted on 12/11.
    - i. 33.44 kW; 165,035 kWh; \$8,785.80
  - h. LED retrofit rebate issued to DBE Insurance
    - i. 0.32 kW; 1,750 kWh; \$211.50
  - i. LED rebate issued to Meeker Memorial
    - i. 3.60 kW; 30,645 kWh; \$1,763.66
  - j. Helping Julie (Co-op) on an LED retrofit
- 6.) Redwood Falls
  - a. LED rebate issued to Casey's General Store
    - i. 1.58 kW; 46,132 kWh; \$3,164
  - b. Dropped off Holiday LED materials at Runnings.
  - c. Rebate issued to Clement's Lumber (LEDs and AC)
    - i. 0.22 kW; 2,119 kWh; \$907
  - d. Helping NorthStar System Built with a potential rebate on a new VSD air compressor.
- 7.) General
  - a. Started survey work on Grand Marais
  - b. Helping with this year's Be Bright and Holiday LED campaigns