



EMS Objective, Target and Action Plan				Document No.		
				4.1		
EMS Participant Name		Dubuque Metropolitan Area Solid Waste Agency		EMS Grant No.		
				N/A		
Common Name for Objective/Target		RNG Distribution				
Objective Description						
Action	Subject		Aspect	Adoption Date		
Develop	Develop and maintain a beneficial landfill gas project		#15 - Landfill gas generation, collection and distribution	12/1/2016		
Target 1 Description (Add sections for additional targets as needed.)						
Action	Subject		Qty to	Metric		
Reduce	Reduce 2,000 Tons of CO2e displaced from fossil fuel use by 6/30/2022.		37,424.00	Tons		
Time Period		Time Period Type (Select)		Component Area (Select)		
FY2017-FY2022		Active Ongoing		Greenhouse Gas Reduction		
Results/Baseline (Update periodically, including each fiscal year by June 30th. Add rows for additional results as needed.)						
Criteria	Applicable Time Period	Qty for Period	Qty for Target To Date	% from Baseline (Calculated)	Narrative Description	Date of Update
Baseline	1/1/2016 - 12/31/2016	39,424.00			CO2 equivalent emissions form the facility.	8/31/2021
1 Results Update	1/1/2017 - 12/31/2017	47,995.30	47,995.30	122%	CO2 equivalent emissions form the facility.	8/31/2021
2 Results Update	1/1/2018 - 12/31/2018	57,447.90	57,447.90	146%	CO2 equivalent emissions form the facility.	8/31/2021
3 Results Update	1/1/2019 - 2/31/2019	25,685.50	25,685.50	65%	CO2 equivalent emissions form the facility.	8/31/2021
4 Results Update	1/1/2020 - 12/31/2020	49,295.40	49,295.40	125%	CO2 equivalent emissions form the facility.	8/31/2021
5 Results Update	1/1/2021 - 12/31/2021		0.00	0%		
6 Results Update	1/1/2022 - 12/31/2022		0.00	0%		
Closure/Final						
Closure Status (Select)						
Action Plan Task/Milestone Descriptions (Add rows for additional tasks/milestones as needed.)						
Task Description	Time Period	Responsibility		Key Resources		
1 Maintain operational efficiency to effectively market to potential developers	12/1/2016 - 6/30/2017	Hughes		Foth and OA Technical Services		
Notes	System has been running at max efficiency for the last two years with reliable data. Will continue with CAR protocol operations but back down on the vacuum. This action will be removed from future reporting. <b>(Completed 6/30/2017)</b>					
Task Description	Time Period	Responsibility		Key Resources		



2	Identify potential developers and keep open dialog with investment opportunities.	7/1/2017 - 12/31/2017	Foster	GDDC, City of Dubuque, professional groups
	<b>Notes</b>	Vendors and developers have been identified and an RFQ/P was sent to perspective partners with response back by June, 2018 <b>(Completed 6/1/2018)</b>		
3	<b>Task Description</b>	<b>Time Period</b>	<b>Responsibility</b>	<b>Key Resources</b>
	Explore the possibility of self-development with local investors	7/1/2017 - 12/31/2017	Foster	Consultants and local business owners
<b>Notes</b>	After discussion with Board of Directors, it was decided a hybrid partnership is preferred to reduce risk exposure to DMASWA. <b>(Completed 2/13/2018)</b>			
4	<b>Task Description</b>	<b>Time Period</b>	<b>Responsibility</b>	<b>Key Resources</b>
	Identify potential CNG market for direct use in the Dubuque Area	1/1/2017 - 06/30/2017	Foster	Staff, GDDC, Area fleets and fuel suppliers
<b>Notes</b>	Discussed the possibility of expanding the CNG needs of the City of Dubuque. DMASWA supported a transportation grant to convert the bus fleet over to CNG. City is piloting a CNG snow & ice truck to evaluate its effectiveness on operations. Discussions are under way with other fleet owners. <b>(Completed 6/30/2017)</b>			
5	<b>Task Description</b>	<b>Time Period</b>	<b>Responsibility</b>	<b>Key Resources</b>
	Develop Pro-forma and contract partnership to develop the project	7/1/2017 - 9/1/2017	Foster	Foster/GDDC/Finance Partner
<b>Notes</b>	Foth prepared Pro-Forma and it was presented to the Board at its Feb. 2018 work session. <b>(Completed 1/15/2018)</b>			
6	<b>Task Description</b>	<b>Time Period</b>	<b>Responsibility</b>	<b>Key Resources</b>
	Determine level of risk tolerance to the DMASWA and develop process for selecting project partners	7/1/2017 - 11/30/2017	Foster	Board of Directors
<b>Notes</b>	Held work session for guidance <b>(Completed 2/13/2018)</b>			
7	<b>Task Description</b>	<b>Time Period</b>	<b>Responsibility</b>	<b>Key Resources</b>
	Develop and Issue a request for qualifications and proposals for a shared development of gas system with focus on a renewable natural gas project.	12/1/2017 - 3/30/2018	Foster	Foster/Foth/GDDC/RNG Work Group
<b>Notes</b>	RFQ/P issued with responses due June 11, 2018 <b>(Completed 3/21/2018)</b>			
8	<b>Task Description</b>	<b>Time Period</b>	<b>Responsibility</b>	<b>Key Resources</b>
	Review proposals for best value to the DMASWA, present recommendation for partner to Directors for authorization to negotiate development and operations agreements.	4/1/2018 - 2/29/2020	Miller	Miller/Foth/GDDC/RNG Work Group



8	<b>Notes</b>	10/1/2018 Conducting contract negotiations with potential developer. 11/1/2018 Redline versions are being reviewed. 12/11/2018 Agreement approved with Trillium for RNG for the vehicle fuel market. <b>(Completed 12/11/2018)</b> 7/30/2019 - Trillium Terminated agreement due to the RIN market downturn rendering the project no longer feasible. 11/1/2019 Conducting contract negotiations with potential developer. Redline versions are being reviewed. 1/28/20 Agreement terms negotiations are nearing completion. 3/18/20 Agreement signed by the Directors with Dubuque Gas Producers, LLC. a subsidiary of Enerdyne Power Systems. <b>(Completed 3/18/2020)</b>		
	<b>Task Description</b>	<b>Time Period</b>	<b>Responsibility</b>	<b>Key Resources</b>
	Assist RNG Partner as outlined in the operations agreement	12/11/18 - 1/1/2022	Miller	Klostermann, Miller, Hughes, Black Hills, MVEC, City of Dubuque Engineering
9	<b>Notes</b>	1/15/20: Began working with Foth on relocating the Methane Flare to an area near the developers future facility. 5/20/20: Agreement signed with Advance One to relocate the Methane Flare and notice to bidders issued for the wellfield expansion project outlined in the Agreement with Dubuque Gas Producers. 6/17/2020: Approved plans for the underground conduit to be installed to provide power to the planned DGP facility. 7/2/2020: Participated in a Development Plan Review meeting with DGP and City of Dubuque on the site planning process for their facility. Flare Relocation was completed. 7/15/2020: Agency board awarded a contract for the expansion of the wellfield, which includes additional wells and pumps in Cells 1-8 and new wells in Cell 9. The goal of this project is to increase gas production to meet the 700 MMBtu requirement in the Agreement with Dubuque Gas Producers. 8/19/2020: Agency Board approved plans and specs for the extension of a watermain to serve the location of DGP plant. 9/23/2020: Project to expand the wellfield began. 12/1/2020: Project to extend water service along Airborne Road to provide water service to DGP facility was begun. Black Hills Energy also began the extension of the natural gas main line to the site. 12/7/2020: Gas Expansion project experienced delays due to positive COVID tests with the construction crew. 12/16/2020: New project completion date approved by Board to reflect the unanticipated delays. 01/27/21: Wellfield expansion project is progressing, estimated completion date is currently mid-February. Lines have all been connected, but some are still being buried. Weather is causing some delays. 3/4/21: All Wells and pumps have been installed and gas is being collected for Cells 1-9. Testing on gas flow will begin Mid-March. 4/7/2021: Project to expand the system is substantially complete with soil restoration and seeding still needed. Partner is tuning the system in preparation for testing. 7/23/2021: Board approved Gas Expansion Project Close out.		
	<b>Task Description</b>	<b>Time Period</b>	<b>Responsibility</b>	<b>Key Resources</b>
	Begin the distribution of RNG	7/1/2021 - 12/31/2021	Miller	Klostermann, Miller, Hughes, DGP

<b>9</b>	<b>Notes</b>	<p>2/5/2021: Dubuque Gas Producers (DPG) has begun site preparation and construction of the gas cleaning and injection facility buildings. 5/17/21: Partner has established a full-time staff member on site. Partner is currently in the process of conducting interviews for a Plant Operator. Partner is continuing to tune the well field as part of the flow verification process. The composition on the gas is being tuned as well. Our Partner informed us that the concrete has all been poured inside the building and the office building buildout should be complete in the next week. In 2-3 weeks processing skids will begin to arrive on site. Electrical equipment is about a month out due to supply issues. In 3-4 weeks the final grade outside the plant will be complete (weather dependent). Black Hills Energy has begun to install quality control equipment onsite. The Partner is also in the process of upgrading the wellfield to a Loci system. 6/23/21: Vessels are being installed along with plant equipment. 7/23/2021: Progress on the plant continues with equipment installation and build out. A committee, with representatives from DGP, Black Hills Energy and City of Dubuque staff has begun to meet to plan for a plant ribbon cutting ceremony. 10/14/2021: Plant Ribbon Cutting occurred and plant began to inject cleaned Landfill Gas into the Blackhills pipeline. This project will annually, through direct and avoided emissions, reduce emissions equivalent to: Carbon sequestered by 104,534 acres of U.S. forests in one year, CO2 emissions from 257,687 barrels of oil consumed, CO2 emissions from 12,468,281 gallons of gasoline consumed, Heating 2,763 homes. 12/7/2021: Plant is operational. Finetuning of the wellfield and plant operation is ongoing.</p>		
<b>10</b>	<b>Task Description</b>	<b>Time Period</b>	<b>Responsibility</b>	<b>Key Resources</b>
	Report on the project progress and re-assess objective and target	1/1/2022 - 6/30/2022	Miller	Core Team
	<b>Notes</b>			
<b>Revision History</b>				
<p>5/2/2019: #9 - Changed person responsible from Foster to Hughes. Changed deadline from 4/21/2019 to 5/5/2020</p> <p>10/4/2019: #11 Klosterman replaced by Miller</p> <p>11/07/2019: #8 Revised deadline from 10/30/2018 to 02/29/2020, replaced Foster with Miller</p> <p>1/2/2020: Added Aspects &amp; Impacts tie in number.</p> <p>8/27/2021: Updated O&amp;T to new format</p>				