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EXEMPTING AIR QUALITY PERMITS MAY JUST HELP REDUCE GREENHOUSE GAS EMISSIONS: SF 1567 AND ANAEROBIC MANURE DIGESTION IN MINNESOTA

Corinne H. Wright[*]

I. INTRODUCTION

The Minnesota Legislature, by passing Senate File ("SF") 1567 (exempting air quality permits for anaerobic manure digesters ("ADs")), created a conflict between federal and state air permitting policy and Minnesota law. This article argues that when SF 1567 was signed into law in July of 2012, it actually created a more stringent environmental standard in Minnesota, even though it exempts air quality permits. What at first appears counterintuitive is explained through consideration of the environmental benefits of AD technology and its relationship not only to the Clean Air Act ("CAA"), but to the Clean Water Act ("CWA"), as well.

Part II establishes the background and history of AD technology in the U.S. The section explains how AD is linked to requirements under the CWA and details its role in the federal government's goal of reducing

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greenhouse gas emissions.[1] Part III highlights the conflict between the Minnesota Legislature's stand to exempt air quality permits for AD systems, and the United States Environmental Protection Agency ("EPA") and Minnesota Pollution Control Agency ("MPCA") permitting goals under the CAA. Part IV offers a solution to the conflict by suggesting Minnesota's exemption of the air quality permits for AD systems is creating a more stringent environmental standard and therefore EPA should issue guidance to the states to eliminate air quality permitting for AD systems.[2]

II. BACKGROUND

A once-popular concept that began losing steam in the early 1980s, AD are again garnering attention as a way for concentrated animal feeding operations ("CAFOs") to reduce greenhouse gas emissions and produce energy, heat, and other valuable by-products.[3] CAFOs are considered point sources of pollution under the CWA and are therefore subject to National Pollutant Discharge Elimination System ("NPDES") permitting requirements.[4] When a CAFO is issued a NPDES permit, the permit includes a requirement to implement a nutrient management plan.[5] The plan must ensure adequate storage for manure and establish protocols for land applying manure that guarantees agricultural utilization of nutrients.[6]

Administration of NPDES permitting is usually the responsibility of individual states, which have legal authority to implement the permitting provisions under the CWA.[7] In Minnesota, the MPCA facilitates the NPDES permitting process.[8]

Because the CWA puts limitations on manure discharge into water sources, many CAFOs are using storage methods like holding tanks and lagoons to contain and manage manure.[9] While these storage methods may be a solution under CWA requirements, they have collateral consequences in the way of greenhouse gas emissions.[10] In response, the EPA, the U.S.

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1 *See infra* Part II.

2 *See infra* Part III.

3 AGSTAR, Recovering Value from Waste, Anaerobic Digester System Basics, Dec. 2011, http://www.epa.gov/agstar/documents/recovering_value_from_waste.pdf [hereinafter Recovering Value].

4 40 C.F.R. §122.23(a) (2011).

5 40 C.F.R. §122.42(e)(1) (2011).

6 40 C.F.R. §122.42(e)(1)(i) and (viii) (2011).

7 40 C.F.R. §123.25(a) (2011).

8 MINN. R. 7001.1000–1150 (2011).

9 40 C.F.R. §122.42(e)(1)(i) (2011); Jennifer C. Fiser, *Legal and Policy Issues Related to Anaerobic Digestion at United States Livestock Facilities*, 3 KY. J. EQUINE, AGRIC. & NAT. RES. L. 221, 232 (2011).

10 *See* Fiser, *supra* note 9, at 232–33 (explaining that many CAFOs have exacerbated the problem of methane emissions by implementing storage systems in order to comply with CWA requirements).

Department of Agriculture ("USDA"), and the U.S. Department of Energy ("DOE") jointly created a voluntary program, called AgSTAR, to promote the management of manure through AD.[11]

A. Anaerobic Manure Digesters

1. History

The early 1970s ushered in an energy crisis that prompted Americans to worry about the nation's food security.[12] Farmers needed energy to run their operations and produce food.[13] The idea of alternative energy was popular, and it became a fashionable proposal to convert livestock waste into energy; so with a burst of enthusiasm, 140 biogas systems were constructed.[14] In 1978, more encouragement came with the enactment of the Public Utility Regulatory Policies Act ("PURPA"), which required utility companies to purchase energy from certain qualifying producers, including biogas produced through anaerobic manure digestion.[15]

The enthusiasm for anaerobic manure digestion was short lived, however. The same year PURPA was enacted, an unfavorable report was released by the Economics, Statistics, and Cooperatives Service, formally a division of the USDA.[16] The report profoundly undercut the economic viability of AD technology, going as far as to say that not only was such technology not currently viable, it was doubtful that such technology would be viable in the foreseeable future.[17]

If the late 1970s had not sealed the fate of AD, the 1980s certainly did—at least for the short term. The energy crisis passed and alternative energy was no longer at the forefront of the public consciousness.[18] Because AD systems turned out to be more complicated and less economically viable

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[11] U.S. ENVTL. PROT. AGENCY, AGSTAR HANDBOOK A MANUAL FOR DEVELOPING BIOGAS SYSTEMS AT COMMERCIAL FARMS IN THE UNITED STATES i (K.F. Roos et al. eds., 2004) *available at* http://www.epa.gov/agstar/documents/AgSTAR-handbook.pdf [hereinafter AGSTAR Handbook].

[12] Fiser, *supra* note 9, at 225.

[13] *Id.*

[14] *See id.*; Allison N. Hatchett, *Bovines and Global Warming: How the Cows are Heating Things up and What Can be Done to Cool Them Down*, 29 WM. & MARY ENVTL. L. & POL'Y REV. 767, 803 (2005); CAROLYN BETTS LIEBRAND & K. CHARLES LING, COOPERATIVE APPROACHES FOR IMPLEMENTATION OF DAIRY MANURE DIGESTERS 1 (USDA Rural Development Research Report 217) (2009), *available at* http://www.rurdev.usda.gov/rbs/pub/RR217.pdf.

[15] Fiser, *supra* note 9, at 225.

[16] *Id.*

[17] *See id.* at 225–26 (noting that the report cited technical and economic limitations with AD including issues with economies of scale and AD's inability to produce large enough quantities of energy and that all and all AD would do little to contribute to the county's energy needs).

[18] *See id*. at 226 (explaining the AD-produced energy was no longer in demand once energy prices dropped).

in practice than initially thought, the popular perception was that AD was a failed concept.[19] Yet a small group of farmers hung on to the concept and used digesters in the face of widespread rejection of the technology.[20] These outlying farmers were able to provide empirical evidence of what did work (and what did not) with the technology as AD began to see a resurgence.[21]

Starting in the 1990s, concern over climate change began to change public perception of alternative energy.[22] In 1992, the U.S. ratified the United Nations Framework Convention on Climate Change.[23] In 1994 the EPA, USDA, and DOE jointly developed AgSTAR with the purpose of developing and promoting AD technology.[24]

At the turn of the century, multiple factors contributed to a resurgence of AD as a viable source of alternative energy, including rising energy costs, worry over the availability of traditional energy sources, and a national shift in conversation toward detrimental effects of greenhouse gasses.[25] By 2011, an estimated 176 AD systems were operating in the U.S. and produced approximately 541 million kilowatt-hours (kWh) of useable energy.[26]

2. Process

Anaerobic digesters are essentially biogas recovery systems.[27] ADs break down bacteria in manure, creating 60 to 70% methane and 30 to 40% carbon dioxide.[28] This biogas is used to generate electricity and natural gas and to fuel heating and cooling systems.[29] Biogas is not the only useful by-

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[19] *See id.* (explaining that many of the parties involved in AD projects, including farmers, bankers, regulators and utility companies, doubted the feasibility of the technology); See also Hatchett, supra note 13, at 803 (noting that the downfall of AD in the 1980s was due in part to poor design, incompetent repair services and inappropriately designated grant money).

[20] Deanne M. Camara Ferreira, *Global Warming and Agribusiness: Could Methane Gas From Dairy Cows Spark The Next California Gold Rush?*, 15 WIDENER L. REV. 541, 548 (2010).

[21] *Id*. *See also* LIEBRAND & LING, *supra* note 14, at 1 (explaining lessons taken from past AD efforts helped improve design, operation, and cost efficiency in new AD projects); *see also* AGSTAR HANDBOOK, *supra* note 11, at 1–5 (noting lessons learned between 1975 and 1985 led to design improvements and cost effectiveness).

[22] Fiser, *supra* note 9, at 227.

[23] *Id*.

[24] *Id*.; AGSTAR HANDBOOK, *supra* note 11, at i.

[25] LIEBRAND & LING, *supra* note 14, at 1.

[26] AGSTAR, U.S. Anaerobic Digester Status: A 2011 Snapshot, *available at* http://www.epa.gov/agstar/documents /2011_digester_update.pdf.

[27] AGSTAR, Anaerobic Digestion, *available at* http://www.epa.gov /agstar/anaerobic/index.html.

[28] *Id*.

[29] JOHN BALSAM UPDATED BY DAVE RYAN, ANAEROBIC DIGESTION OF ANIMAL WASTES: FACTORS TO CONSIDER 1 (ATTRA 2006), *available at*

product of AD—digested solids and liquids are also a result of AD and can be used as soil amendments, liquid fertilizer, compost, animal bedding, and fiber-based products.[30]

Anaerobic digestion is a two-stage process.[31] In the first stage anaerobic bacteria convert the volatile solids in manure into fatty acids.[32] In the second stage, the acids are converted into biogas by methane-producing bacteria called methanogens.[33] All of this occurs in an airtight container that allows the bacteria to flourish while capturing the resulting biogas.[34] Manure is added to the digester and remains there for approximately 20 days before it moves to the effluent storage and handling system.[35] Once the biogas is collected from the AD tank, it is conditioned and processed.[36]

3. Types

As of 2011, there were seven different types of AD systems operational in the U.S., including: plug flow, complete mix, covered lagoon, up-flow anaerobic sludge blanket/induced blanket reactor, fixed film, anaerobic sequencing batch reactors, and high solids fermentation.[37] Four of the most common systems are covered in greater detail below:

- Plug flow digesters have a long narrow tank where new manure entering the tank pushes the older manure further down the tank.[38] Plug flow digesters typically require 11 to 13% total solids in the manure.[39]
- Complete mix digesters have a cylindrical silo-like tank where the manure is heated and mechanically mixed and kept in suspension.[40] These digesters work best with 3 to 10% solids in slurry manure.[41]

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http://www.wcasfmra.org/biogas_docs/ATTRA%20anaerobic.pdf; Recovering Value, *supra* note 3.

30 Recovering Value, *supra* note 3.
31 BALSAM, *supra* note 29, at 2.
32 *Id*.
33 *Id*.; LIEBRAND & LING, *supra* note 14, at 2.
34 LIEBRAND & LING, *supra* note 14, at 2.
35 *Id.*
36 Recovering Value, *supra* note 3.
37 *Id.*
38 BALSAM, *supra* note 29, at 3; Recovering Value, *supra* note 3; LIEBRAND & LING, *supra* note 14, at 3.
39 BALSAM, *supra* note 29, at 3; Recovering Value, *supra* note 3; LIEBRAND & LING, *supra* note 14, at 3.
40 BALSAM, *supra* note 29, at 3; Recovering Value, *supra* note 3; LIEBRAND & LING, *supra* note 14, at 3.
41 BALSAM, *supra* note 29, at 3; Recovering Value, *supra* note 3; LIEBRAND & LING, *supra* note 14, at 3.

- Covered lagoons sit in the ground with an impermeable gas-collecting cover fitted on top.[42] This is the least expensive digester from both an installation and operational standpoint, but it is also the system with the lowest gas production and is more suitable for warmer climates.[43] Covered lagoon digesters work best with 0.5 to 3% solids in the manure.[44]
- Fixed film digesters consist of a tank filled with plastic or wood pieces that support a thin layer of anaerobic bacteria.[45] This system requires manure with less than 5% solids.[46]

4. Benefits

There are numerous benefits of anaerobic digester systems, and they fall into two general categories: environmental and economic.[47] The methane captured from the AD system is methane that does not enter the atmosphere, resulting in reduced greenhouse gas emissions.[48] Meanwhile, AD not only captures methane, but also produces biogas that can be used as energy.[49] Furthermore, AD systems separate solid and liquid portions of the manure and create valuable by-products like compost, soil amendment, fertilizer, and animal bedding.[50]

a. Environmental

The benefit of capturing methane may be the greatest environmental benefit of using anaerobic digestion. According to the EPA, methane, which is considered a greenhouse gas, remains in the atmosphere for approximately 9 to 15 years and is more than 20 times better at trapping heat in the

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[42] BALSAM, *supra* note 29, at 3; Recovering Value, *supra* note 3; LIEBRAND & LING, *supra* note 14, at 3.
[43] BALSAM, *supra* note 29, at 3; Recovering Value, *supra* note 3; LIEBRAND & LING, *supra* note 14, at 3.
[44] BALSAM, *supra* note 29, at 3; Recovering Value, *supra* note 3; LIEBRAND & LING, *supra* note 14, at 3.
[45] BALSAM, *supra* note 29, at 3; Recovering Value, *supra* note 3; LIEBRAND & LING, *supra* note 14, at 3.
[46] BALSAM, *supra* note 29, at 3; Recovering Value, *supra* note 3; LIEBRAND & LING, *supra* note 14, at 3.
[47] Recovering Value, *supra* note 3.
[48] *Id*.
[49] *Id*.
[50] *Id*.

atmosphere than carbon dioxide (CO_2).[51] In 2011, AD systems reduced methane emissions by 55,000 metric tons.[52]

Another positive effect of anaerobic digestion is its biologically stabilizing nature that essentially removes the compounds in manure that create its familiar and unpleasant odor.[53] This can reduce the risk of complaints from neighbors or nuisance lawsuits and create goodwill with a community and regulators when taking necessary steps to commence or continue operations.[54]

ADs also have CWA implications. As noted earlier, under the CWA, CAFOs are considered point sources of pollution.[55] Many CAFOs utilize storage tanks and lagoons to comply with CWA standards, but by storing manure in these ways, methane gas emissions increase.[56] With AD, the problem of methane gas emissions is solved through its capture.[57] Then, because the resulting digester effluent is more uniform than untreated manure, it is both better utilized by crops and easier to apply—making it is less likely to pollute surface or groundwater.[58]

Furthermore, AD works to help CAFOs comply with nutrient management plans required under the NPDES.[59] This is because AD does not remove nutrients in the manure during the digestion process, such that the effluent remains nutrient rich.[60] Therefore, not only do ADs decrease the amount of methane released, they also promote compliance with standards under the CWA by contributing to a CAFO's overall nutrient management plan.[61] Meanwhile, the process of AD kills most manure-borne pathogens, so even when there is runoff, the effluent is safer than if from undigested manure.[62]

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51 U.S. ENVTL. PROT. AGENCY, Methane, *available at* http://www.epa.gov/methane/.

52 Recovering Value, *supra* note 3. The reduction in methane emissions by 55,000 metric tons is equivalent to removing 294,000 cars from the road, or reducing oil consumption by 3.5 million barrels, or reducing gasoline consumption by 168 million gallons. *Id*.

53 LIEBRAND & LING, *supra* note 14, at 4.

54 *Id*. at 10; *see also* Camara Ferreira, *supra* note 20, at 552 (observing that digesters help make CAFOs friendlier neighbors).

55 *See supra* Part III.

56 *Id*.

57 Recovering Value, *supra* note 3.

58 AGSTAR HANDBOOK, *supra* note 11, at 1–5.

59 40 C.F.R. §122.42(e)(1)(viii)(2011); Fiser, *supra* note 9, at 233.

60 *See* Fiser, *supra* note 9, at 233 (explaining that nutrients are not removed from the manure during digestion).

61 *Id*.

62 *Id*.

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b. Economic

The EPA has identified four main avenues for profiting from AD systems.[63] The first is that agricultural operations using ADs rely less on purchased energy.[64] The second is the capability to sell excess energy to a local utility company.[65] The third is the capacity to harness heat created by the digestion process and use it for water and space heating.[66] The fourth is the ability to sell carbon credits in greenhouse gas markets.[67]

The economically viable by-products from AD consist of digested solids and liquids as well as methane.[68] The solids and liquids can be used as soil amendments and liquid fertilizers.[69] Digested manure effluent is a superior fertilizer to untreated manure because, once digested, the nutrients are in a form that plants can utilize more readily.[70] When the effluent is run through a separator, the digested liquid can be sprayed on fields as fertilizer, and the digested solids can be converted into animal bedding, soil amendment, and compost.[71]

The methane, which is a primary component of biogas, can be converted to energy or used as fuel.[72] Some AD operators have chosen to use the energy to power their own farms, as well as to sell the energy produced to local utility companies.[73]

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[63] Nicole G. Di Camillo, *Methane Digesters and Biogas Recovery—Masking The Environmental Consequences of Industrial Concentrated Livestock Production*, 29 UCLA J. ENVT. L & POL'Y 365, 373 (2011) (citing U.S. ENVTL. PROT. AGENCY, EPA-430-8-06-004, *Market Opportunities for Biogas Recovery Systems: A Guide to Identify Candidates for On-Farm and Centralized Systems* 4, *available at* http://nepis.epa.gov/ Exe/ZyPURL.cgi?Dockey=P1008VEI.txt).

[64] *Id*.

[65] *Id*.

[66] *Id*.

[67] *Id.*

[68] Recovering Value, *supra* note 3.

[69] *Id*.

[70] LIEBRAND & LING, *supra* note 14, at 4.

[71] *Id*.

[72] BALSAM, *supra* note 29, at 1; Recovering Value, *supra* note 3; *see also* Nicholas M. White, *Industry-Based Solutions to Industry-Specific Pollution: Finding Sustainable Solutions to Pollution From Livestock Waste*, 15 COLO. J. INT'L ENVTL. L. & POL'Y 153, 156 (2004) (noting that approximately fifty dairy cows could produce enough energy to heat a three-bedroom home).

[73] *See* White, *supra* note 72, at 156 (explaining that a Vermont farmer has constructed and used an AD system that provides not only electric power to his farm but oftentimes leaves him with excess energy that he sells to a local utility company). *See also* CARL NELSON & JOHN LAMB, FINAL REPORT: HAUBENSCHILD FARMS ANAEROBIC DIGESTER (Aug. 2002), *available at* http://www.theminnesotaproject.org /publications/Haubyrptupdated .pdf. This report highlights the Haubenschild Farm in Princeton, Minnesota which was selected as an AGSTAR charter farm. The digester produces enough energy to run the farm and farm entered into a contract with a local electric cooperative to sell its excess energy. *Id*. at 1–2.

B. Regulation

Both federal and state regulations apply to CAFOs and AD permitting requirements.[74] On the federal level, the EPA focuses on three main areas: solid waste, water, and air.[75] Federal solid waste regulations require no solid waste permits for manure itself; however in some states, if an AD digests other organic products, it can be designated as a waste processing facility and required to comply with regulations under the Resource Conservation Recovery Act ("RCRA").[76]

As stated previously, the EPA regulates CAFOs that discharge to U.S. waters and because CAFOs are defined as point sources of pollution under the CWA, they must obtain an NPDES permit.[77] Under the same regulations, large CAFOs must develop and maintain nutrient management plans.[78]

Regulations promulgated under the CAA may govern airborne emissions from AD systems.[79] Air permit requirements vary by locality.[80]

In Minnesota, the MPCA not only regulates animal feedlots—it also regulates many aspects of livestock manure, including collection, storage, processing, and disposal.[81] The MPCA further regulates air pollutants in conjunction with the EPA under the CAA.[82] As part of that regulatory regime, MPCA facilitates an air quality permitting program.[83]

The argument put forth in this article is that the MPCA need not require an additional air permit for the biogas and standby generators utilized as part of a basic AD system because the Minnesota legislature has specifically exempt manure digesters and associated equipment from air emission permits.[84] It did so when the governor signed SF 1567 into law on April 2, 2012, amending Minnesota law to eliminate the need for air emission permits for equipment associated with AD systems outside metropolitan areas.[85]

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[74] AGSTAR, Permitting Practices for Co-digestion Anaerobic Digester Systems, http://www.epa.gov/ agstar/tools/permitting.html.

[75] *Id*.

[76] *Id*.

[77] *See supra* Part III.

[78] *Id*.

[79] AGSTAR HANDBOOK, *supra* note 11, at 8–4.

[80] *Id*. at 1–5.

[81] MINN. POLLUTION CONTROL AGENCY, *Feedlot Program*, *available at* http://www.pca.state.mn.us/ index.php/topics/feedlots/feedlots.html?menuid=&redirect=1

[82] MINN. POLLUTION CONTROL AGENCY, Air Pollutants, *available at* http://www.pca.state.mn.us/index.php/air/air-quality-and-pollutants/air-pollutants/air-pollutants.html.

[83] MINN. POLLUTION CONTROL AGENCY, All About Air Permits, *available at* http://www.pca.state.mn.us index.php/air/air-permits-and-rules/air-permits-and-forms/air-permits/all-about-air-permits.html?menuid=&redirect=1 [hereinafter All About Air Permits].

[84] MINN. STAT. § 116.07(7e) (2012).

[85] 2012 Minn. Laws ch. 150, S.F. No. 1567

III. EPA/MPCA PERMITTING V. MINNESOTA LAW

Because states are essentially left to their own devices when it comes to the implementation, monitoring, and enforcement of EPA regulations, standards can vary from state to state.[86] Although the EPA, through its AgSTAR project, encourages AD projects, farmers may still face permitting hurdles when working to establish and operate AD systems.[87] This is particularly salient in the case of air quality permits required by the MPCA, even as Minnesota law has been amended to exempt AD systems from just such a permitting requirement.[88] What the Minnesota legislature seems to understand, and what EPA and MPCA may have forgotten, is the goal of the AgSTAR program. The program, which is jointly sponsored by the EPA, encourages AD systems because of their many environmental benefits.[89] By passing SF 1567 into law, Minnesota lawmakers removed a permitting roadblock that makes the process of getting an AD system up and running in Minnesota easier and faster, thereby clearing the way for future AD system success stories.

IV. SOLUTION

Just as the Minnesota legislature identified the upside to exempting air permit requirements by passing SF 1567, the MPCA should follow suit by halting air quality permit requirements for AD systems. Furthermore, as part of its AgSTAR initiative, EPA should issue guidance addressed to states to relieve operators of AD systems from air quality permitting requirements, regardless of whether AD combustion devices fall within federal emission thresholds. As the EPA AgSTAR handbook advocates (in the Permitting and Other Regulatory Issues section), the benefits brought by AD projects should be "emphasized during the permitting process."[90] The MPCA already conducts extensive feedlot permitting,[91] so requiring additional air quality permitting for AD systems loses sight of such benefits.

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86 AGSTAR HANDBOOK, *supra* note 11, at 8–1.

87 Fiser, *supra* note 9, at 237–38 (noting that although environmental benefits encourage the implementation of AD systems at times farmers have a difficult time getting all the necessary permits, which in some states can be multiple).

88 All About Air Permits, *supra* note 83. The web page lists the current thresholds for New Source Review (NSR) pollutants including nitrogen oxides (NO_x) and sulfur dioxides (SO_x) as 100 tons and 20 tons per year respectively. *Id*. NO_x and SO_x emissions are known emissions from AD. *See* AGSTAR HANDBOOK, *supra* note 11, at Introduction – i (explaining that the program encourages the use of AD systems to reduce methane emissions and provide other benefits to the environment).

89 AGSTAR HANDBOOK, *supra* note 11, at 1–4, 1–5.

90 *Id*. at 8–4.

91 *See* MINN. POLLUTION CONT. AGENCY, *Feedlot Permit Information and Application Forms*, *available at* http://www.pca.state.mn.us/index.php/topics/feedlots/feedlot-permit-information-and-application-forms.html (last modified Apr. 30, 2012).

Because there is a tension between federal policies which promote the use of AD systems to reduce greenhouse gas emissions, [92] CAA regulations which set nitrogen oxide and sulfur dioxide emission thresholds for energy conversion,[93] MPCA air permitting requirements,[94] and Minnesota law (which now exempts air quality permitting for AD systems),[95] the next question is how to complement federal policy with state enforcement in order to achieve the Minnesota Legislature's intention—that is, not requiring air permits for AD systems outside the metro area.[96]

One way to determine the most appropriate level of regulation for a particular environmental problem is through a method called the "matching principle."[97] The matching principle matches the scale of the environmental problem with the appropriate jurisdictional level.[98] Local problems should be regulated at the local level and problems that implicate other states should be regulated nationally.[99]

If we turn the idea of Minnesota air quality permitting on its head, there is an argument that air quality permitting for AD systems actually contributes to greenhouse gas emissions by bogging down the process of getting an AD system up and running. Methane emissions are not the only factor; the value of the byproducts as alternative energy, bedding, compost, and soil amendment are all squandered when an AD system remains dormant waiting for a permit. Worrying about the emissions of the AD system generators at the expense of getting an AD system operational is akin to missing the forest for the trees. Under the matching principle, the issue of local air quality permitting for ADs can be thought of, not as a local environmental problem, but as an issue that impacts the nation's interest in alternative energy and the limitation of greenhouse gas emissions. Under this principle, then, it would be sensible for the EPA to issue guidance addressed to states to eliminate air quality permitting for AD systems.

V. CONCLUSION

The Minnesota legislature, by passing SF 1567, can be understood as advocating and promoting AD systems in Minnesota. At first, it may be counterintuitive to argue that exempting air quality permits creates a more stringent environmental standard in Minnesota, but considering the

92 AGSTAR HANDBOOK, *supra* note 11, at i.

93 42 U.S.C. §§ 7401–7431 (2011).

94 All About Air Permits, *supra* note 83.

95 MINN. STAT. § 116.07(7e)(2012).

96 *Id*.

97 Alice Kaswan, *A Cooperative Federalism Proposal For Climate Change Legislation: The Value of State Autonomy In A Federal System*, 85 DENV. U.L. REV. 791, 794 (2008).

98 *Id*.

99 *Id*.

environmental benefits of AD technology, the permit exemption can be seen as shoring up statewide support for AD systems, and all its environmental benefits. It is not unusual for states to enact greenhouse gas emission control policies that later are adopted on a national scale.[100] Minnesota's air quality permit exemption is a step in streamlining AD implementation processes and directly aligns with the spirit of the AgSTAR program. If the EPA and MPCA embrace the Minnesota air quality permit exemption, it will increase the ease with which digesters can be implemented and remove unnecessary roadblocks to their continued adoption in Minnesota.

[100] *See* William L. Andreen, *Federal Climate Change Legislation and Preemption*, 3 ENVTL. & ENERGY L. & POL'Y J. 261, 287 (2008) (stating that many nationally used emission control technologies were first launched at the state level including catalytic converters, electronic fuel injection systems, and cleaner fuel).