Message

From: Jones, Enesta [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=65B8E6C6E5CA4A7A9AE85D98A4C8EEDB-EJONES02]
Sent: 12/1/2017 2:58:01 PM
To: Arlene Karidis [Ex. 6]
CC: Press [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b293283291dc44e0b5d1c36be9281d8a-Press]
Subject: FW: Waste360 Request EPA LMOP Program

Hi Arlene,

Please attribute the responses to Kirsten Cappel, LMOP Program Manager.

Can you provide a statement that: Points out a few key components to the landfill methane outreach program.

LMOP is a voluntary program that works cooperatively with industry stakeholders and waste officials to reduce or avoid methane emissions from landfills. LMOP encourages the recovery and beneficial use of biogas generated from organic municipal solid waste (MSW). LMOP forms partnerships with communities, landfill owners and operators, utilities, power marketers, states, project developers, tribes and nonprofit organizations to overcome barriers to project development.

LMOP activities include:

- <!--[if !supportLists]--><!--[endif]-->Providing technical assistance, guidance materials and software to assess the potential economic feasibility of an LFG energy project.
- <!--[if !supportLists]--><!--[endif]-->Developing informational materials about the benefits of renewable energy from biogas generated from MSW, as well as opportunities to reduce emissions from existing MSW landfills.
- <!--[if !supportLists]--><!--[endif]-->Fostering partnerships and identifying financing for biogas projects.
- <!--[if !supportLists]--><!--[endif]-->Creating networking opportunities with peers and renewable energy experts.

Can you provide a statement that: Illustrates a couple of specific examples where industry stakeholders leveraged the above referenced program components to work together to avoid methane emissions, or to accomplish some goal that the LMOP helps these stakeholders with?

See example projects listed below.

Can you give an example of a partnership where communities, landfill owners, utilities, states, or other members overcame a barrier(s) to project development? And how the LMOP program was key to helping them do it?

See example projects listed below.

Any measurable accomplishments from this program? (if there is a way to track methane emissions reduction, projects that launched and what kinds they are, or whatever other way you'd have to measure impact)

LFG energy projects prevent direct methane emissions from landfills and reduce indirect CO_2 emissions by displacing energy generated from the burning of fossil fuels with LFG, an alternative energy source.

LMOP reduced methane emissions from hundreds of U.S. landfills and avoided CO_2 emissions totaling approximately 42.5 $MMTCO_2e$ in 2016.

Over the past 22 years, LMOP has assisted 649 LFG energy projects. The 649 LMOP-assisted projects have collectively reduced and avoided more than 427 $MMTCO_2e$ since the program began.

Have there been any changes in the landfill methane outreach program since its inception? What would be a couple of main changes? Why were they made and how has it impacted the program? (I am trying to show evolution of a big project here, assuming it has evolved)

In 1994, EPA established LMOP to encourage more widespread use of LFG to promote cost-effective recovery of this valuable resource. At the inception of the program, LMOP's focus was to provide direct technical assistance and outreach support to stakeholders to promote the beneficial use of LFG and galvanize the industry.

Over time, as the industry and stakeholders matured, LMOP has focused more on the development and dissemination of technical tools and resources including a comprehensive database on LFG energy projects and candidate landfills in the United States; a cost-estimating tool that provides an initial economic feasibly analysis for developing an LFG energy project; and a handbook that provides an overview of LFG energy project development.

To illustrate the growth in the industry, in 1995 there were 146 operational LFG energy projects; in 2016, there were 648. The number of LMOP Partners has grown to over 1,100 Partners in 2017.

Example Projects:

St. Landry Parish Landfill CNG Project, Louisiana

- <!--[if !supportLists]--><!--[endif]-->This LFG-to- compressed natural gas (CNG) project that produces 630 gallons of gasoline equivalent per day of CNG, was self-developed by St. Landry Parish Solid Waste Disposal District.
- <!--[if !supportLists]--><!--[endif]-->The project was first operational in 2012, expanding in 2015, and resulted in significant air quality benefits, unique environmental education opportunities for the local community, and an invitation to discuss their success story during a trade mission to France.
- <!--[if !supportLists]--><!--[endif]-->To support the development of the project, LMOP:
  - <!--[if !supportLists]--><!--[endif]-->Provided assistance with LFG and economic models
  - <!--[if !supportLists]--><!--[endif]-->Visited the site in June 2004
  - <!--[if !supportLists]--><!--[endif]-->Highlighted the site as part of the 2008 Project Expo
  - <!--[if !supportLists]--><!--[endif]-->Sent RFP for project developer via LMOP listserv
- <!--[if !supportLists]--><!--[endif]-->St. Landry Parish Landfill CNG Project was presented with the 2012 LMOP Project of the Year Award in January 2013.

Watauga County Landfill Small Electricity Project, North Carolina

- <!--[if !supportLists]--><!--[endif]-->Watauga County's 186-kilowatt (kW) model project was developed at a small, closed landfill and is the first instance of an LFG-fired application of an engine type previously used only to destroy methane from coal mine gas.
- <!--[if !supportLists]--><!--[endif]-->In addition to the environmental benefits achieved, this self-developed project that became operational in March 2012, turns an annual profit of $72,000 and reduce the landfill's electricity bill by 80 percent.
- <!--[if !supportLists]--><!--[endif]-->To support the development of the project, LMOP:
  - <!--[if !supportLists]--><!--[endif]-->Conducted a preliminary screening analysis report
  - <!--[if !supportLists]--><!--[endif]-->Provided guidance materials
  - <!--[if !supportLists]--><!--[endif]-->Co-hosted and presented at a seminar on RFP development and other topics for NC State Energy Office grant awardees including Watauga County in March 2011
  - <!--[if !supportLists]--><!--[endif]-->Prepared ribbon cutting posters/flyers for their event in December 2011
- <!--[if !supportLists]--><!--[endif]-->**Watauga County Landfill Small Electricity Project was presented with the** 2012 LMOP Project of the Year in January 2013.

La Crosse County Landfill and Gundersen Health System CHP Project, Wisconsin

- <!--[if !supportLists]--><!--[endif]-->A public/private partnership between Gundersen Health System and La Crosse County led to this combined heat and power (CHP) project that serves as an excellent example of cost savings combined with environmental stewardship. The county benefits from a new revenue stream and its landfill is the first in the state to receive "Green Tier" status from the Wisconsin Department of Natural Resources.
- <!--[if !supportLists]--><!--[endif]-->A 2-mile pipeline brings LFG under Interstate 90 from the county landfill to create green power for the local grid and heat both buildings and water on the health system's campus.
- <!--[if !supportLists]--><!--[endif]-->This project became operational in March 2012.
- <!--[if !supportLists]--><!--[endif]-->To support the development of the project, LMOP:
    - <!--[if !supportLists]--><!--[endif]-->Highlighted the site as part of the 2010 Project Expo
    - <!--[if !supportLists]--><!--[endif]-->Visited the site in February 2010
    - <!--[if !supportLists]--><!--[endif]-->Provided assistance with LFG and economic models
    - <!--[if !supportLists]--><!--[endif]-->Prepared ribbon cutting posters/flyers for their event in May 2012
- <!--[if !supportLists]--><!--[endif]-->La Crosse County Landfill and Gundersen Health System CHP Project was awarded LMOP 2012 Project of the Year in January 2013.

Orange County's Olinda Alpha Landfill Combined Cycle Project, California

- <!--[if !supportLists]--><!--[endif]-->Employing creative financing and innovative emission controls, Broadrock Renewables, DCO Energy, and Orange County implemented the second-largest LFG-fueled power plant (32.5-MW) in the country. Financing included a $10 million ARRA grant from the Department of Energy and a Section 1603 grant from the U.S. Treasury.
- <!--[if !supportLists]--><!--[endif]-->Positive impacts on the local, regional, and national economy stem from local green power usage by the City of Anaheim, annual county LFG revenues of $2.75 million, and manufacture of all major equipment components in the United States (including the four gas turbines which were built only 100 miles away from the power plant).
- <!--[if !supportLists]--><!--[endif]-->The project's combined cycle process is more efficient than a standard gas turbine project with a 45 percent gross electrical efficiency, and the plant's wastewater is used to control dust at the landfill in place of potable water supplies.
- <!--[if !supportLists]--><!--[endif]-->This project has 22 LMOP Partners involved.
- <!--[if !supportLists]--><!--[endif]-->This project became operational in June 2012.
- <!--[if !supportLists]--><!--[endif]-->To support the development of the project, LMOP:
    - <!--[if !supportLists]--><!--[endif]-->Participated in an in-person meeting
    - <!--[if !supportLists]--><!--[endif]-->Provided networking opportunities at annual LMOP Conferences which played a critical role in the project's development
    - <!--[if !supportLists]--><!--[endif]-->Prepared ribbon cutting posters/flyers for their event in October 2012
- <!--[if !supportLists]--><!--[endif]-->Orange County's Olinda Alpha Landfill Combined Cycle Project was awarded LMOP 2012 Project of the Year in January 2013.

Gaston County Solid Waste and Recycling Division, North Carolina

- <!--[if !supportLists]--><!--[endif]-->Forward-thinking Gaston County identified three primary sustainability goals in 2008 related to its waste management practices: reduce landfill emissions, produce renewable energy, and provide infrastructure for a new Eco-Industrial Park. With a voluntary gas collection system installed, a self-developed LFG electricity project (2.8-MW) in operation, and the Park's grading and utility hook-ups in place, the county is well on its way to realizing all of its main objectives.
- <!--[if !supportLists]--><!--[endif]-->This project became operational in August 2011.
- <!--[if !supportLists]--><!--[endif]-->To support the development of the project, LMOP:
    - <!--[if !supportLists]--><!--[endif]-->Highlighted the site as part of the 2007 Project Expo
    - <!--[if !supportLists]--><!--[endif]-->Provided assistance with LFG models
    - <!--[if !supportLists]--><!--[endif]-->Conducted a search for potential LFG end users

- <!--[if !supportLists]--><!--[endif]-->Gaston County was awarded LMOP 2013 Community Partner of the Year in January 2014.

Can you lead me to specific partners with a story explaining what they accomplished together? I saw partners listed on your site but it would be helpful if you could direct me to a couple of them rather than for me to randomly call some of them looking for an example)

If you are interested in contacting any of the partners discussed above and need more information, we can provide contact information.

From: Arlene Karidis Ex. 6
Date: November 28, 2017 at 10:41:39 AM EST
To: "jones.enesta@epa.gov" <jones.enesta@epa.gov>
Subject: FW: Waste360 Request EPA LMOP Program

Hi Enesta,

Per my phone message, could you assist with my request (BELOW). This is a story on EPA's Landfill Methane Outreach Program. I'd orginally hoped to have answers by Nov 30 but can get a deadline extension. Could you please let me know when I could expect answers?

Best,
Arlene

From: Arlene Karidis
Sent: Tuesday, November 28, 2017 10:03 AM
To: 'StClair.Christie@epa.gov' <StClair.Christie@epa.gov>
Subject: FW: Waste360 Request EPA LMOP Program

Hi Christie,

I'm writing to make sure you saw my email request from a week ago (BELOW). I can get a deadline extension if that helps but please let me know when I can have responses. As far as needing LMOP program participants, **It's very important that I have names and who they work for this week if possible** – or if there is an online list of participants could I be directed to that?

Thanks,

Best,
Arlene

From: Arlene Karidis
Sent: Tuesday, November 21, 2017 1:54 PM
To: 'StClair.Christie@epa.gov' <StClair.Christie@epa.gov>
Subject: Waste360 Request EPA LMOP Program

Hi Christie,

Per my voice message, I will be writing for Waste360 on EPA's Landfill Methane Outreach program and was looking for a few good, live statements to add to what I pulled from the agency's website. Could I have responses by **Nov 30**?

QUESTIONS

- Can you provide a statement that:
  Points out a few key components to the landfill methane outreach program.

- Illustrates a couple of specific examples where industry stakeholders leveraged the above referenced program components to work together to avoid methane emissions, or to accomplish some goal that the LMOP helps these stakeholders with?

Can you give an example of a partnership where communities, landfill owners, utilities, states, or other members overcame a barrier(s) to project development? And how the LMOP program was key to helping them do it?

Can you lead me to specific partners with a story explaining what they accomplished together? I saw partners listed on your site but it would be helpful if you could direct me to a couple of them rather than for me to randomly call some of them looking for an example)

Any measurable accomplishments from this program? (if there is a way to track methane emissions reduction, projects that launched and what kinds they are, or whatever other way you'd have to measure impact)

Have there been any changes in the landfill methane outreach program since its inception? What would be a couple of main changes? Why were they made and how has it impacted the program? (I am trying to show evolution of a big project here, assuming it has evolved)

Name and title of person I am to quote.

Thank you.