Partnership Expo
Project Guide

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This guide contains descriptions of potential methane emissions reduction projects displayed at the Methane to Markets Partnership Expo held in Beijing, China on 30 October – 1 November 2007.

DISCLAIMER: The information and predictions contained within these project descriptions are based on the data provided by the site owners and operators. The Methane to Markets Partnership cannot take responsibility for the accuracy of this data.

AGRICULTURE

	Name of Project (Location)	Description	Emissions Reductions (tCO_2Eq)*	Contact
Argentina				
Poster and Flyer	Marcos Juarez Experimental Field (Cordoba Province, Argentina)	This is a grower-finish farm (80 gestating sows and 420 feeder pigs) with current manure management using a hose/water and storing liquid/slurry waste in a pond, tank or basin with discharge to sub-surface land. The proposed methane recovery system is a mixed digester and the resulting biogas will be utilized for heating.	191	Dario Panichellie (INTA)
Poster and Flyer	Rafaela Dairy Operation (Santa Fe Province, Argentina)	This is a freestall and pasture dairy farm (250 dairy cows) with current manure management method using a hose/water and solids separation with a settling basin, an anaerobic lagoon, an aerobic lagoon, and solid waste storage in a stack or pile. Waste is discharged to surface waters. The proposed methane recovery system is a plug flow digester and the resulting biogas will be utilized for heating.	42	Veronica Charlon (INTA)
Brazil				
Poster and Flyer	Araquari Swine Operation (Araquari, Santa Catarina, Brazil)	A farrow-to-finish swine operation (2,100 pigs) currently utilizes lagoon storage of the liquid/slurry waste in a leaky anaerobic digester lagoon that will be adapted. The existing manure disposal method is land application. The proposed methane recovery system is to adapt the lagoon digester to process and to separate the methane gas. The biogas, after being purified, will be utilized for electricity and heating.	654	Ulisses Molon (Araquari Farm)
Poster and Flyer	Mato Grosso Swine Operation (Mato Grosso Province, Brazil)	A farrow-to-finish swine operation (127,000 pigs) currently employs a flush barn with anaerobic lagoon treatment. The existing manure disposal method is land application. The proposed methane recovery system is a covered lagoon digester and the resulting biogas will be utilized for electricity.	71,730	Kazu Ohno (Sansuy) Hamilton Ida (LogiCarbon)
Poster and Flyer	Sao Paulo Dairy Operation (Sao Paulo Province, Brazil)	A freestall dairy farm (1,000 dairy cows) currently using a flush barn with a settling basin for solids separation and an anaerobic lagoon. The existing manure disposal method is land application. The proposed methane recovery system is a covered lagoon digester and the resulting biogas will be utilized for electricity and heating.	5,459	Kazu Ohno (Sansuy) Hamilton Ida (LogiCarbon)
Poster and Flyer	University of Sao Paulo Digester for Animal & Food Waste (Piracicaba, Sao Paulo, Brazil)	The Biodigestor Project at the Universidade de São Paulo (USP) aims to improve the use of the animal waste produced in the campus and develop environmental academic activities. The current manure management system includes waste storage in solid stacks or ponds for liquid/slurry waste, and land application. The proposed methane recovery system is an inflatable plug-flow anaerobic digester and the resulting biogas will be utilized for cooking.	101	Luis Gustavo Tudeshini (USP)

*Estimated average annual emissions reductions resulting from the proposed project.

	Name of Project (Location)	Description	Emissions Reductions (tCO_2Eq)*	Contact
India				
Poster and Flyer	Uria Biosystem Dairy Waste-to-Energy (Maharashtra, India)	This project is an example of a dairy buffalo farm (100 cows). Current manure management method is manual collection; some of the manure is stored and dried for fuel, other manure is stored in a pond with the effluent used as fertilizer. The proposed methane recovery system for this farm is a floating dome anaerobic digester with biogas utilized for electricity and cooking fuel. Additionally, the digester slurry will be used as organic manure to replace chemical fertilizer on cropland.	46	Gaganan Patil (Urja BioSystems)
Mexico				
Flyer only	El Carmen Swine Operation (Michoacán state, Mexico)	A grower-finish farm (3,750 pigs) uses a flush barn where the liquid/slurry waste is stored in a basin or pond. The existing manure disposal method is land application. The proposed methane recovery system is a covered lagoon digester and the resulting biogas will be utilized for light and heating; unused methane will be flared to reduce GHG emissions.	687	Luis Alberto Lopez Carvajal Edgar Del Villar Alvelais (SEMARNAT)
Poster and Flyer	El Rancho Swine Operation (Yucatán state, Mexico)	This farrow-to-finish farm (34,500 pigs) currently uses a flush barn with an anaerobic lagoon. The existing manure disposal method is land application and discharge to surface waters. The proposed methane recovery system is a covered lagoon digester and the resulting biogas will be utilized for light, heating, and electricity; unused methane will be flared to reduce GHG emissions.	12,179	Arturo Gary Buenfil and Romeo Gomez (farm contacts), Luis Alberto Lopez Carvajal (SEMARNAT)
Poster and Flyer	Huaniqueo Swine Operation (La Piedad, Michoacán state, Mexico)	A farrow-to-finish farm (16,170 pigs) currently utilizing a flush barn with an anaerobic lagoon. The existing manure disposal method is land application and discharge to surface waters. The proposed methane recovery system is a covered lagoon digester and the resulting biogas will be utilized for light, heating, and electricity; unused methane will be flared to reduce GHG emissions.	5,708	Ernesto Aceves Torres (farm owner), Luis Alberto Lopez Carvajal (SEMARNAT)
Flyer only	La Canada Swine Operation (Lerma-Chapala watershed area, Michoacán state, Mexico)	A grower-finish farm (2,220 pigs) currently using a flush barn where the liquid/slurry waste is stored in a basin or pond. The existing manure disposal method is land application and discharge to surface waters. The proposed methane recovery system is a covered lagoon digester and the resulting biogas will be utilized for light and heating; unused methane will be flared to reduce GHG emissions.	407	Luis Alberto Lopez Carvajal Edgar Del Villar Alvelais (SEMARNAT)
Flyer only	La Illusion Swine Operation (Lerma-Chapala watershed area, Michoacán state, Mexico)	A farrow-to-finish farm (6,920 pigs) currently utilizing a flush barn where the liquid/slurry waste is stored in a basin or pond. The existing manure disposal method is land application and discharge to surface waters. The proposed methane recovery system is a covered lagoon digester and the resulting biogas will be utilized for light and heating; unused methane will be flared to reduce GHG emissions.	1,268	Luis Alberto Lopez Carvajal Edgar Del Villar Alvelais (SEMARNAT)

*Estimated average annual emissions reductions resulting from the proposed project.

	Name of Project (Location)	Description	Emissions Reductions (tCO_2Eq)*	Contact
Flyer only	La R Swine Operation (Lerma-Chapala watershed area, Michoacán state, Mexico)	A farrow-to-finish farm (6,900 pigs) currently utilizing a flush barn where the liquid/slurry waste is stored in a basin or pond. The existing manure disposal method is land application and discharge to surface waters. The proposed methane recovery system is a covered lagoon digester and the resulting biogas will be utilized for light and heating; unused methane will be flared to reduce GHG emissions.	1,268	Luis Alberto Lopez Carvajal Edgar Del Villar Alvelais (SEMARNAT)
Flyer only	La Victoria Swine Operation (Lerma-Chapala watershed area, Michoacán state, Mexico)	This grower-finish farm (4,030 pigs) currently uses a flush barn where the liquid/slurry waste is stored in a basin or pond. The existing manure disposal method is land application and discharge to surface waters. The proposed methane recovery system is a covered lagoon digester and the resulting biogas will be utilized for light and heating; unused methane will be flared to reduce GHG emissions.	738	Luis Alberto Lopez Carvajal Edgar Del Villar Alvelais (SEMARNAT)
Flyer only	Lomas 1 Swine Operation (Lerma-Chapala watershed area, Michoacán state, Mexico)	A grower-finish farm (4,000 pigs) currently utilizing a flush barn where the liquid/slurry waste is stored in a basin or pond. The existing manure disposal method is land application and discharge to surface waters. The proposed methane recovery system is a covered lagoon digester and the resulting biogas will be utilized for light and heating; unused methane will be flared to reduce GHG emissions.	732	Luis Alberto Lopez Carvajal Edgar Del Villar Alvelais (SEMARNAT)
Flyer only	Lomas 2 Swine Operation (Lerma-Chapala watershed area, Michoacán state, Mexico)	A grower-finish farm (4,200 pigs) utilizing a flush barn where the liquid/slurry waste is stored in a basin or pond. The existing manure disposal method is land application and discharge to surface waters. The proposed methane recovery system is a covered lagoon digester and the resulting biogas will be utilized for light and heating; unused methane will be flared to reduce GHG emissions.	768	Luis Alberto Lopez Carvajal Edgar Del Villar Alvelais (SEMARNAT)
Flyer only	Porsega Swine Operation (Lerma-Chapala watershed area, Michoacán state, Mexico)	A farrow-to-finish farm (5,010 pigs) currently using a flush barn where the liquid/slurry waste is stored in a basin or pond. The existing manure disposal method is land application and discharge to surface waters. The proposed methane recovery system is a covered lagoon digester and the resulting biogas will be utilized for light and heating; unused methane will be flared to reduce GHG emissions.	918	Luis Alberto Lopez Carvajal Edgar Del Villar Alvelais (SEMARNAT)
Flyer only	San Bernardo Swine Operation (Lerma-Chapala watershed area, Michoacán state, Mexico)	A grower-finish farm (3,130 pigs) utilizes a flush barn where the liquid/slurry waste is stored in a basin or pond. The existing manure disposal method is land application and discharge to surface waters. The proposed methane recovery system is a covered lagoon digester and the resulting biogas will be utilized for light and heating; unused methane will be flared to reduce GHG emissions.	573	Luis Alberto Lopez Carvajal Edgar Del Villar Alvelais (SEMARNAT)
Flyer only	San Cristobal Swine Operation (Lerma-Chapala watershed area, Michoacán state, Mexico)	A grower-finish farm (3,130 pigs) using a flush barn where the liquid/slurry waste is stored in a basin or pond. The existing manure disposal method is land application and discharge to surface waters. The proposed methane recovery system is a covered lagoon digester and the resulting biogas will be utilized for light and heating; unused methane will be flared to reduce GHG emissions.	563	Luis Alberto Lopez Carvajal Edgar Del Villar Alvelais (SEMARNAT)

*Estimated average annual emissions reductions resulting from the proposed project.

	Name of Project (Location)	Description	Emissions Reductions (tCO_2Eq)*	Contact
Flyer only	San Nicolas Swine Operation (Lerma-Chapala watershed area, Michoacán state, Mexico)	A farrow-to-finish farm (7,380 pigs) currently employing a flush barn where the liquid/slurry waste is stored in a basin or pond. The existing manure disposal method is land application and discharge to surface waters. The proposed methane recovery system is a covered lagoon digester and the resulting biogas will be utilized for light and heating; unused methane will be flared to reduce GHG emissions.	1,351	Luis Alberto Lopez Carvajal Edgar Del Villar Alvelais (SEMARNAT)
Flyer only	Zambrano Swine Operation (Lerma-Chapala watershed area, Michoacán state, Mexico)	A grower-finish farm (3,770 pigs) utilizing a flush barn where the liquid/slurry waste is stored in a basin or pond. The existing manure disposal method is land application and discharge to surface waters. The proposed methane recovery system is a covered lagoon digester and the resulting biogas will be utilized for light and heating; unused methane will be flared to reduce GHG emissions.	691	Luis Alberto Lopez Carvajal Edgar Del Villar Alvelais (SEMARNAT)
Poster only	Swine Grower-Finish Operations (Lerma-Chapala watershed area, Michoacán state, Mexico)	This poster represents six grower-finish swine operations: La Canada, La Victoria, Lomas 1, Lomas 2, San Cristobal, and Zambrano.	3,899	See individual flyers.
Poster only	Swine Farrow-to-Finish Operations (Lerma-Chapala watershed area, Michoacán state, Mexico)	This poster represents six farrow-to-finish swine operations: El Carmen, La Ilusion, La R, Porsega, San Bernardo, and San Nicholas.	6,062	See individual flyers.
United States				
Poster and Flyer	Northeast Iowa Biomethane Electricity (NEIBE) Project (Iowa, United States of America)	Grogan, Foster, Lloyd & Company is assessing the feasibility of a biomethane energy generation project to be located in the Midwest region of the United States. The project will build one or more biomethane-based electricity generation facilities with a total generation potential of 3.5 MW. These facilities will be supported by currently captured biomethane and up to five digesters that will use manure from multiple farms.	Unknown	R.C. O'Arria and Judith Boulet (Grogan, Foster, Lloyd & Company)

COAL MINES

	Name of Project (Location)	Description	Emissions Reductions (tCO_2Eq)*	Contact
China				
Poster only	Hebi CMM Power Generation (Hebi, Henan, China)	Located in Hebi Coal Mining Area, in Mid-China's Henan Province, the coal mine has currently installed underground and surface gas extraction stations and part of the gas extracted has been used as fuels for power generation and residential consumption. Gas emitted during mining operations has been vented mostly to the atmosphere directly from the mine shaft. The project would utilize gas originally vented to the atmosphere to generate electricity.	300,000	Liu Wenge (China Coal Information Institute)

*Estimated average annual emissions reductions resulting from the proposed project.

	Name of Project (Location)	Description	Emissions Reductions (tCO_2Eq)*	Contact
Poster only	Hongneng Coal Mine CMM Recover and Utilization Project (Chongqing, China)	The Hongneng Coal Mine, located in Nanchuan Region, has established the surface gas extraction system, with extracting capacity 4.7-6.6 m^3/min and gas concentration 17-33.7%. Gas extracted from the coal mine has not been utilized to date, but vented directly to the atmosphere. The project has planned to use coal mine gas extracted from the coal mine to generate electricity.	100,000	Liu Wenge (China Coal Information Institute)
Poster only	Jixi CMM Power Generation Project (Jixi, Heilongjiang, China)	Jixi CMM Power Generation Project, located in Jixi Coal Mining Area in the southeast of Heilongjiang province, will install a total of 13 MW of gas engine generating capacity and establish surface drainage system extract CMM from four separate coal mines (Xinhua, Chengzihe, Pingang, and Didao) in Jixi Coal Mining Group Co.	340,000	Liu Wenge (China Coal Information Institute)
Poster only	Longfeng Coal Mine and Honglin Coal Mine Gas Power Generation Project (Guiyang, Guizhou, China)	Surface gas extraction systems have been established at both mines located in Bijie Region of Guizhou. Capacity of the gas extraction system in Longfeng Coal Mine is 350 m^3/min, with gas concentration of 16% approximately. Capacity of the gas extraction system in Honglin Coal Mine is 320 m^3/min, with gas concentration of 19% approximately. Gas extracted from both mines has not been utilized to date but vented directly to the atmosphere. The project is planned to use vented air to generate electricity.	300,000	Liu Wenge (China Coal Information Institute)
Poster only	Pingdingshan No. 4 VAM to Energy Project (Pingdingshan, Henan, China)	Located in Pingdingshan Coal Mining Area in Mid-China's Henan Province, No. 4 Coal Mine has installed 2 underground gas extraction stations, with the extracting capacity 62.5 m^3/min and the average methane concentration over 15%. Both the VAM and gas extracted from No. 4 Coal Mine have not been used, all vented to the atmosphere. The project would recover and utilize the VAM to generate electricity.	400,000	Liu Wenge (China Coal Information Institute)
Poster only	Pingdingshan No. 8 CMM Drainage and Utilization Project (Pingdingshan, Henan, China)	Pingdingshan Coal Mining Area has 6 ground and 1 surface gas extraction stations, with extracting capacity of 2,800 m^3/min. A part of CMM extracted from No. 8 Coal Mine has been used to generate electricity. The project would employ the Gobwell technology to strengthen CMM extraction, recovering and utilizing the methane originally vented to the atmosphere via the mine shaft to generate electricity.	200,000	Liu Wenge (China Coal Information Institute)
Poster only	Shigang Coal Mine CMM Purification/Liquefaction and Utilization Project (Yangquan, Shanxi, China)	A CMM Purification/Liquefaction Test Station has been established at the Shigang Coal Mine in Yangquan Coal Mining Area, with treating capacity of 4,300 m^3/d and LNG production capacity of 1.22 t/d. The project would purify CMM up to the standard of methane content for natural gas with the low temperature CMM liquefaction and separation technology and the resulting purified methane will be used as town gas.	400,000	Liu Wenge (China Coal Information Institute)

*Estimated average annual emissions reductions resulting from the proposed project.

	Name of Project (Location)	Description	Emissions Reductions (tCO_2Eq)*	Contact
Poster only	Shigang Coal Mine VAM Utilization Project (Yangquan, Shanxi, China)	Located in Yangquan Mining Community, Shigang Coal Mine has currently installed surface gas extraction stations with total rated flow of 60 m^3/min. The mine will build new gas extraction stations this year with the maximum extracting capacity of the system expected to be up to 1,000 m^3/min of the mixed volume. Both the VAM and gas extracted in Shigang Coal Mine have not been used, all vented to the atmosphere. The project would recover and utilize VAM to generate electricity.	400,000	Liu Wenge (China Coal Information Institute)
Poster only	Shihao Coal Mine VAM Recovery and Utilization Project (Chongqing, China)	Located in Songzao Mining Area in Chongqing Municipality in Southwest China, Shihao Coal Mine has installed surface gas extraction stations and the volume of gas extracted in 2007 is expected to be 38 Mm^3/a, with the average methane concentration over 40%. The volume of gas utilized in Shihao Mine has been close to 16 Mm^3/a, mainly used as fuels for residential consumption and power generation. VAM has not been used, all vented to the atmosphere. The project would recover and utilize VAM to generate electricity.	400,000	Liu Wenge (China Coal Information Institute)
Poster only	Songzao CMM Purification and Utilization Project (Chongqing, China)	In 2006, the volume of gas extracted in Songzao Coal Mining Area was 160 Mm^3, mainly used as town gas and fuels for industries and power generation. The remaining 80 Mm^3 gas (pure methane) has not been used but vented to the atmosphere currently. The project is planned to employ advanced CMM purification technologies to desulfurize and deoxidize the CMM. After removing the impurities such as CO_2, the concentration of CMM is expected to be over 90% and the purified gas would be delivered to Chongqing Municipality by tank wagons.	1,100,000	Liu Wenge (China Coal Information Institute)
India				
Flyer only	Korba Coalfield (Chattisgarh Region, India)	Korba Coalfield covers an area of about 530 square kilometers, characterized by the existence of thick, strippable coal seams suitable for power generation comprising of E, F & G grade coals. At present, there is no system of methane drainage and CMM utilization. The project envisions pre-drainage of methane before face advancement and the drained methane could be utilized for power generation or to supplement the need of local power plants.	875,983	South Eastern Coalfields Ltd.
Flyer only	Singrauli Coalfield (Varanasi, Uttar Region, India)	Singrauli Coalfield has a present production of 52 mt and dip side extension of the mines are being planned to expand production. At present, there is no system of methane drainage and CMM utilization. The project envisions pre-drainage of methane before face advancement and the drained methane could be utilized for power generation or to supplement the need of local power plants.	1,059,831	Northern Coalfields Limited (NCL)

*Estimated average annual emissions reductions resulting from the proposed project.

	Name of Project (Location)	Description	Emissions Reductions (tCO_2Eq)*	Contact
Mexico				
Poster and Flyer	Mimosa Mines Methane Project (Palau City, Coahuila, Mexico)	Minerales Monclova, S.A. DE C.V., Mexico's largest coal producer, yielded 2.8 million tonnes in 2005 and 4 million in 2006. The mined coal is entirely used by Altos Hornos de Mexico for the production of steel. This project activity proposes a combination of flaring and power generation, depending on gas yields, to achieve maximum destruction and optimal usage.	606,630	Ing. Lorenzo Gonzalez Merla (Minerales Monclova, Project Owner/Developer) or Gareth Phillips (Sindicatum Carbon Capital International Ltd., Project Sponsor)
Nigeria				
Flyer only	Ogboyoga Mine Power Generation (Anambra Coal Basin, Nigeria)	The Ogboyoga mine is one of the many coal properties that are being privatized by the Nigerian federal government. The Nigerian government projects that in excess of USD 5 billion will be invested in coal development and utilization activities in this coalfield in the next five years.	59,976	Solomon O. Adesanya (Federal Ministry of Environment, Housing, and Urban Development)
Flyer only	Okpara Mine Power Generation (Enugu State, Nigeria)	Although active mining ceased at the Okpara Mine in 2003, production is expected to recommence in 2010, and could rise to as much as 400,000 tonnes. Upon resumption of active longwall mining, it is planned that drained methane will be used to generate 1.24 megawatts (MW) of turbine-based electric power which will be sold to the mine.	987,000	Dr. Bunmi Ogunsola (TEMEC)
Russia				
Poster only	Gob Methane Recovery and Utilization at Capitalynaya and Osinnikovskaya Mines (Osynniky, Kemerovo Region, Russia)	The Moscow State Mining University (MSMU) conceived the project "Drilling, Equipment, and Operation of Degassing Wells Aimed at Gob Methane Recovery and Utilization." The methane recovered at the first stage is to be burnt in gas utilization equipment, at which time research of the quantity and structure of gas will be done.	170,000	Puchcov Lev Aleksandrovich and Slastunov Sergey Viktorovich (MSMU) and Larasevich Aleksandr Miroslavovich (Promgaz)
Ukraine				
Poster and Flyer	Degasification Modernization and Expansion at Bazhanov Mine (Makeyevka, Donetsk, Ukraine)	The Bazhanov Mine seeks to establish a commercial program for CMM recovery and utilization. The aggregate methane recovered from the mine is estimated to produce approximately 17 million m^3/year of usable gas. Primary potential end-uses include fuel for heat and power generations, with secondary uses as transportation fuel, petro-chemical feedstock, or residential heating and cooking.	150,000	Andrey Oleksyuk (Bazhanov Coalmine)
Poster only	Kalinina Mine (Donetsk, Ukraine)	The vacuum-pump station at the Kalinina mine produces between 0.223 to 0.419 million m^3/month of CMM with typical methane concentrations fluctuating between 38 to 52%. These conditions are suitable for a CMM recovery and utilization project to produce thermal and electric energy. The project will consist of two 1 MW power generation installations that will utilize methane to produce power and heat for mining operations.	1,250,000	Borys Gryadushchyy (Donugi)
Poster only	Kirov Mine (Makeyevka District, Donetsk, Ukraine)	The Kirov mine, owned by Makeyevugol Coal Company, intends to initiate a CMM project that includes the following: installing new, larger diameter piping, new vacuum pumps, and enlarging vent shaft to improve ventilation systems. These modifications will help enhance existing degasification systems and significantly improve the safety and productivity of the mine.	Not available	Volodymyr Pilipenko

*Estimated average annual emissions reductions resulting from the proposed project.

LANDFILLS

	Name of Project (Location)	Description	Emissions Reductions (tCO_2Eq)*	Contact
Argentina				
Poster and Flyer	Bahia Blanca Landfill (Bahia Blanca, Argentina)	Bahia Blanca sanitary landfill, opened in 1992, accepts approximately 76,620 tonnes of waste annually (910,000 tonnes in place) and is expected to close in 2031 with an estimated capacity of 3.34 million tonnes of waste. Preliminary biogas modeling estimates that 625 m^3/hr of biogas at 50% methane will be recoverable for capture and use, and that will rise to a peak of approximately 1,300 m^3/hr shortly in 2031. Preliminary evaluation revealed flaring-only project as most economically feasible.	50,028	Alicia Alvarez (Municipality of Bahia Blanca), Ricardo Rollandi (CLIBA), Lic. Francisco Ocampo (Secretariat of Environment - Argentina), Brian Guzzone (U.S. EPA Landfill Methane Outreach Program)
Poster and Flyer	Bower Landfill (Cordoba, Argentina)	Bower sanitary landfill, opened in 1982, received approximately 565,500 tonnes of waste in 2006 (8.9 million tonnes in place). The disposal rate is estimated to increase approximately 2.5% annually and the landfill is expected to close in 2028 with an estimated capacity of 25.6 million tonnes of waste. No preliminary biogas modeling or proposed project options provided.	73,907	Gabriela Faustinelli (Municipality of Cordoba), Gabriel Blanco (Argentina Secretary of Environment and Sustainable Development Climate Change Department)
Poster and Flyer	Neuquen Landfill (Neuquen, Argentina)	Neuquén sanitary landfill, opened in 1999, accepts approximately 75,680 tonnes of waste annually (550,000 tonnes in place) and is expected to close in 2015 with an estimated capacity of 1.3 million tonnes of waste. Preliminary biogas modeling estimates that 282 m^3/hr of biogas at 50% methane will be recoverable for capture and use in 2008, and that will rise to a peak of approximately 565 m^3/hr shortly after closure in 2015. Preliminary evaluation revealed flaring-only project as most economically feasible.	27,092	Carlos Alberto Yanez (Municipality of Neuquen), Lic. Francisco Ocampo (Secretariat of Environment - Argentina), Brian Guzzone (U.S. EPA Landfill Methane Outreach Program)
Poster and Flyer	Rio Cuarto Landfill (Rio Cuarto, Argentina)	Rio Cuarto sanitary landfill, opened in 2002, received approximately 68,300 tonnes of waste in 2006 (298,400 tonnes in place). The disposal rate is estimated to increase approximately 1.6% annually and the landfill is expected to close in 2026 with an estimated capacity of 1.9 million tonnes of waste. No preliminary biogas modeling or proposed project options provided.	10,000	Eduardo Raffo (Municipality of Rio Cuarto) and Gabriel Blanco (Argentina Secretary of Environment and Sustainable Development Climate Change Department)
Poster and Flyer	San Javier Landfills II and III (Salta, Argentina)	San Javier II sanitary landfill, opened in 1999, received approximately 141,000 tonnes of waste in 2006 (2.32 million tonnes in place) and is expected to close in 2007 with an estimated capacity of 1.2 million tonnes of waste. San Javier III will open in 2008 and the disposal rate is estimated to increase approximately 2% annually. San Javier III is expected to close in 2014 with an estimated capacity of 936,200 tonnes of waste. No preliminary biogas modeling or proposed project options provided.	10,621	Emiliano Venier (Municipality of Salta) and Gabriel Blanco (Argentina Secretary of Environment and Sustainable Development Climate Change Department)

*Estimated average annual emissions reductions resulting from the proposed project.

	Name of Project (Location)	Description	Emissions Reductions (tCO_2Eq)*	Contact
Poster and Flyer	San Nicolas Landfill (San Nicolas, Buenos Aires Province, Argentina)	San Nicolás sanitary landfill, opened in 1997, accepts approximately 43,600 tonnes of waste annually (430,000 tonnes in place) and is expected to close in 2081 with an estimated capacity of 12.7 million tonnes of waste. Preliminary biogas modeling estimates that 366 m^3/hr of biogas at 50% methane will be recoverable for capture and use in 2008, and that will rise to a peak of approximately 3,483 m^3/hr shortly after closure in 2081. Preliminary evaluation revealed flaring-only project as most feasible.	29,313	Fernando Azcoitia (Azcoitia y Cia), Lic. Francisco Ocampo (Argentina Secretariat of Environment), Brian Guzzone (U.S. EPA Landfill Methane Outreach Program)
Brazil				
Poster only	Multiple Sites in Brazil (see list at right)	U.S. EPA expects to complete assessment reports for the 11 Brazil landfills listed here (municiaplity, state) by the end of 2007: Aracaju, Sergipe; Belo Horizonte, Minas Gerais; Campinas, Sao Paulo; Caxias do Sul, Rio Grande do Sul; Cuiaba, Mato Grosso; Gioania, Goias; Gravatai, Rio Grande do Sul; Ribeirao Preto, Sao Paulo; Santo Ande, Sao Paulo; Uberlandia, Minas Gerais; and Varzea Paulista, Sao Paulo.	987,429	Victoria Ludwig (U.S. EPA Landfill Methane Outreach Program)
China				
Poster and Flyer	Gaoantun Landfill (Beijing, China)	Gaoantun sanitary landfill, opened in 2002, accepts approximately 1,000,000 tonnes of waste annually (4,000,000 tonnes in place) and is expected to close in 2014 with an estimated 8,000,000 tonnes of waste. Preliminary biogas modeling estimates that 1,700 m^3/hr of biogas at 50% methane is currently recoverable for capture and use, and that will rise to a peak of approximately 3,150 m^3/hr shortly after closure in 2014. Project options include electricity generation or other direct use(s) of landfill gas.	39,841	Zhang Quanhong (Beijing Chaoyang District Garbage Innocent Disposal Centre), Xu Haiyun or Shao Jun (Ministry of Construction/Shanghai Environment Group Co., or Rachel Goldstein (U.S. EPA Landfill Methane Outreach Program)
Poster and Flyer	Gaoyan Landfill (Guiyang City, China)	Gaoyan sanitary landfill, opened in 2001, accepts approximately 4 million tonnes of waste annually (2.32 million tonnes in place) and is expected to close in 2032 with an estimated capacity of 13.2 million tonnes of waste. Preliminary biogas modeling estimates that 440 m^3/hr of biogas at 50% methane is currently recoverable for capture and use, and that will rise to a peak of approximately 1,200 m^3/hr shortly after closure in 2033. Project options include electricity generation or other direct use(s) of landfill gas.	60,869	ZHOU Xiao Qing (Guiyang City Bureau of Urban Administration), XU Haiyun/SHAO Jun (Ministry of Construction/Shanghai Environment Group Co.), Rachel Goldstein (U.S. EPA Landfill Methane Outreach Program)
Poster only	Haikou Landfill (Hai Kou City, Hai Nan Province, China)	Haikou sanitary landfill, opened in 1999, accepts approximately 360,000 tonnes of waste annually (2.64 million tonnes in place) and is expected to close in 2025 with an estimated capacity of 11.09 million cubic meters of waste. No preliminary biogas modeling or proposed project options provided.	Not available	Yu Fang Huang (The Environment Sanitation Bureau of Hai Kou), Chief Eng. Xu Haiyun (Ministry of Construction Urban Construction Design Research Institute)
Poster only	Harbin Southwest Landfill (Harbin City, Hei Longjang Province, China)	Harbin Southwest sanitary landfill, opened in 2005, accepts approximately 380,000 tonnes of waste annually (31,200 tonnes in place) and is expected to close in 2025 with an estimated capacity of 7.8 million cubic meters of waste. No preliminary biogas modeling or proposed project options provided.	Not available	Song Wang (The Environment Sanitation Bureau of Harbin), Chief Eng. Xu Haiyun (Ministry of Construction Urban Construction Design Research Institute)

*Estimated average annual emissions reductions resulting from the proposed project.

	Name of Project (Location)	Description	Emissions Reductions (tCO_2Eq)*	Contact
Poster and Flyer	Jilin City Landfill (Jilin City, China)	Jilin City sanitary landfill, opened in 2003, accepts approximately 290,000 tonnes of waste annually (1.16 million tonnes in place) and is expected to close in 2023 with an estimated capacity of 5.8 million tonnes of waste. Preliminary biogas modeling estimates that 262 m^3/hr of biogas at 50% methane is currently recoverable for capture and use, and that will rise to a peak of approximately 874 m^3/hr shortly after closure in 2024. Project options include electricity generation.	46,787	Wang Zhongyu (Jilin City Environmental Hygiene Science Research Center), Xu Haiyun (Ministry of Construction), Shao Jun (Shanghai Environment Group Co.), Rachel Goldstein (U.S. EPA Landfill Methane Outreach Program)
Poster only	Lichong Channel Landfill (Liu Zhou City, Guang Xi Autonomous Region, China, Owned by Liu Zhou City)	Lichong Channel sanitary landfill, opened in 2004, accepts approximately 250,000 tonnes of waste annually (751,000 tonnes in place) and has a design capacity of 8 million cubic meters of waste. No preliminary biogas modeling or proposed project options provided.	Not available	Wei Wei (Environment Sanitation Bureau of Li Zhou), Chief Eng. Xu Haiyun (Ministry of Construction, Urban Construction Design Research Institute)
Poster only	Lingshan Landfill (Ji Mo City, Shan Dong Province, China, Owned by Yu Jie Waste Disposal Company)	Lingshan sanitary landfill, opened in 2003, accepts approximately 12,000 tonnes of waste annually (220,000 cubic meters in place) and has a design capacity of 3.79 million cubic meters of waste. No preliminary biogas modeling or proposed project options provided.	Not available	Wei Min Sun (The Environment Sanitation and Landscape Bureau of Ji Mo), Chief Eng. Xu Haiyun (Ministry of Construction, Urban Construction Design Research Institute)
Poster only	Longquan Mountain Landfill (He Fei City, An Hui Province, China, Owned by Environment Sanitation Bureau of He Fei City)	Longquan Mountain sanitary landfill, opened in 2004, accepts approximately 380,000 tonnes of waste annually (640,000 tonnes in place) and the first phase is expected to close in 2017 with a design capacity of 9.6 million cubic meters of waste. No preliminary biogas modeling or proposed project options provided.	Not available	Sun Yu Lin (The Environment Sanitation Bureau of He Fei, Chief Eng. Xu Haiyun (Ministry of Construction, Urban Construction Design Research Institute)
Poster only	Qingkun MSW Landfill (Bao Tou City, Inner Mongolia Autonomous Region, China, Owned by Bao Tou City)	Qingkun MSW landfill, opened in 2000, accepts approximately 360,000 tonnes of waste annually (1.5 million tonnes in place) and is expected to close in 2007 with an estimated capacity of 2.4 million tonnes of waste. Preliminary biogas modeling estimates that 495 m^3/hr of biogas at 50% methane is currently recoverable for capture and use, and that will rise to a peak of approximately 609 m^3/hr shortly after closure in 2007. Proposed project options were not provided.	16,916	Zhang Wen Yu (The Environment Sanitation Bureau of Bao Tou), Chief Eng. Xu Haiyun (Ministry of Construction, Urban Construction Design Research Institute)
Poster and Flyer	Yongle Landfill (Siping City, China)	Yongle landfill, opened in 1992, accepts approximately 90,000 tonnes of waste annually (1.37 million tonnes in place) and is expected to close in 2022 with an estimated capacity of 2.7 million tonnes of waste. Preliminary biogas modeling estimates that 230 m^3/hr of biogas at 50% methane is currently recoverable for capture and use, and that will rise to a peak of approximately 289 m^3/hr shortly after closure in 2023. Project options include electricity generation or other direct use(s) of landfill gas.	21,632	Meng Qing Min (Siping City Construction Bureau), Xu Haiyun (Ministry of Construction), Shao Jun (Shanghai Environment Group Co.), Rachel Goldstein (U.S. EPA Landfill Methane Outreach Program)
Poster only	Zhanjiang Landfill (Zhan Jiang City, Guang Dong Province, China, Owned by Zhan Jiang City)	Zhanjian sanitary landfill, opened in 2005, accepts approximately 250,000 tonnes of waste annually (63,490 tonnes in place) and has a design capacity of 620,000 cubic meters of waste. No preliminary biogas modeling or proposed project options provided.	Not available	Hong Ri Jin (The Municipal and Landscape Bureau of Zhan Jiang) and Chief Eng. Xu Haiyun (Ministry of Construction, Urban Construction Design Research Institute)

*Estimated average annual emissions reductions resulting from the proposed project.

	Name of Project (Location)	Description	Emissions Reductions (tCO_2Eq)*	Contact
Colombia				
Flyer only	Dona Juana Landfill (Bogota, Colombia)	Dona Juana sanitary landfill, opened in 1989, received approximately 2.1 million tonnes of waste in 2006 (30 million tones in place). The disposal rate is estimated to increase 2.0% annually and the landfill is expected to close in 2016 with an estimated capacity of 49.6 million tonnes of waste. Preliminary biogas modeling estimates that 18,300 m^3/hr of biogas at 50% methane will be recoverable for capture and use in 2008, and that will rise to a peak of approximately 21,160 m^3/hr shortly after closure in 2017. Project options include electricity generation, direct use, and flaring only.	1,206,969	Humberto Ferreira (Unidad Administrativa Especial de Servicios Publicos, Municipality of Bogota, Distrito Capital), Roberto Esmeral Berrio (Grupo Mitigacion Cambio Climatico, Viceministerio de Ambiente Colombia), Victoria Ludwig (U.S. EPA Landfill Methane Outreach Program)
Poster and Flyer	El Navarro Landfill (Cali, Colombia)	El Navarro sanitary landfill, opened in 1970, accepts approximately 600,000 tonnes of waste annually (19 million tonnes in place) and is expected to close in 2007 with an estimated capacity of 19.1 million tonnes of waste. Preliminary biogas modeling estimates that 5,303 m^3/hr of biogas at 50% methane will be recoverable for capture and use in 2008, and project biogas recovery will decline after 2008. Project options include electricity generation, direct use, and flaring only.	160,594	Susana Correa Borrero (EMSIRVA E.S.P.), Roberto Esmeral (Grupo Mitigacion Cambio Climatico, Viceministerio de Ambiente Colombia), Victoria Ludwig (U.S. EPA Landfill Methane Outreach Program)
Flyer only	La Pradera Landfill (Medellin, Colombia)	La Pradera sanitary landfill, opened in 2003, received approximately 703,100 tonnes of waste in 2006. The disposal rate is estimated to increase 3% annually (currently 2.8 million tonnes in place) and the landfill is expected to close in 2016 with an estimated capacity of 10.7 million tonnes of waste. Preliminary biogas modeling estimates that 4,809 m^3/hr of biogas at 50% methane will be recoverable for capture and use in 2008, and that is estimated to increase to a peak of approximately 7,705 m^3/hr shortly after 2015. Project options include electricity generation, direct use, and flaring only.	398,129	Luis Fernando Restrepo Aramburo (Universidad de Antioquia), Roberto Esmeral (Grupo Mitigacion Cambio Climatico, Viceministerio de Ambiente Colombia), Victoria Ludwig (U.S. EPA Landfill Methane Outreach Program)
Poster and Flyer	Loma de Los Cocos Landfill (Cartagena, Colombia)	Loma de los Cocos sanitary landfill, opened in 2006, received approximately 310,000 tonnes of waste that year. The disposal rate is estimated to increase 2.5% annually (currently 400,000 tonnes in place) and is expected to close in 2026 with an estimated capacity of 8.2 million tonnes of waste. Preliminary biogas modeling estimates that 783 m^3/hr of biogas at 50% methane is currently recoverable for capture and use, and that will rise to a peak of approximately 3,881 m^3/hr shortly after closure in 2026. Project options include electricity generation, direct use, and flaring only.	122,072	Juan Carlos Nieto (Caribe Verde), Roberto Esmeral (Grupo Mitigacion Cambio Climatico, Viceministerio de Ambiente Colombia), Victoria Ludwig (U.S. EPA Landfill Methane Outreach Program)

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Code	Name of Project (Location)	Description	Emissions Reductions (tCO_2Eq)*	Contact
Ecuador				
Flyer only	Chabay Landfill (Azogues, Ecuador)	Chabay sanitary landfill, opened in 1996, accepts approximately 12,300 tonnes of waste annually (124,170 tonnes in place) and is expected to close in 2022 with an estimated capacity of 434,000 tonnes of waste. Preliminary biogas modeling estimates that 30 m^3/hr of biogas at 50% methane is currently recoverable for capture and use, and that will rise to a peak of approximately 90 m^3/hr shortly after closure in 2022. Based on predicted gas availability, a small microturbine project option might be feasible.	3,692	Ing. Luis Bonilla (Municipality of Azogues), Roberto Urquizo (Ecuador Ministry of the Environment), Brian Guzzone (U.S. EPA Landfill Methane Outreach Program)
Poster and Flyer	El Valle Landfill (Cuenca, Ecuador)	El Valle sanitary landfill, opened in 1980, accepts approximately 50,400 tonnes of waste annually. The landfill closed in 2001 with an estimated capacity of 1.3 million tonnes of waste. Preliminary biogas modeling estimates that 207 m^3/hr of biogas at 50% methane is currently recoverable for capture and use, and this volume will continue to decrease into the future. Based on predicted gas availability, a small microturbine project option might be feasible.	8,288	Econ. Esteban Bernal (Empresa Municipal de Aseo de Cuenca), Roberto Urquizo (Ecuador Ministry of the Environment), Brian Guzzone (U.S. EPA Landfill Methane Outreach Program)
Poster and Flyer	Las Iguanas Landfill (Guayaquil, Ecuador)	Las Iguanas sanitary landfill, opened in 1994, received approximately 850,000 tonnes of waste in 2007 (8 million tonnes in place) and is expected to close in 2021 with an estimated capacity of 23 million tonnes of waste. Preliminary biogas modeling estimates that 7,061 m^3/hr of biogas at 50% methane is currently recoverable for capture and use, and that will rise to a peak of approximately 14,784 m^3/hr shortly after closure in 2021. Project options include electricity generation, flaring, and/or leachate evaporation.	560,513	Eng. Gustavo Zuniga Gebert (Municipality of Guayaquil), Roberto Urquizo (Ecuador Ministry of the Environment), Brian Guzzone (U.S. EPA Landfill Methane Outreach Program)
Poster and Flyer	Loja Landfill (Loja, Ecuador)	Loja sanitary landfill, opened in 1997, accepts approximately 30,000 tonnes of waste annually (292,978 tonnes in place) and is expected to close in 2008, although continued expansion through 2017 would yield an estimated capacity of 750,000 tonnes of waste. Preliminary biogas modeling estimates that 127 m^3/hr of biogas at 50% methane is currently recoverable for capture and use, and that will rise to a peak of approximately 261 m^3/hr shortly after closure in 2017, provided that the landfill continues to expand. Options include a small heat or co-generation project.	14,697	Ing. Jorge Arturo Bailon Abad (Municipality of Loja), Roberto Urquizo (Ecuador Ministry of the Environment), Brian Guzzone (U.S. EPA Landfill Methane Outreach Program)
Poster and Flyer	Pichacay Landfill (Cuenca, Ecuador)	Pichacay sanitary landfill, opened in 2001, received approximately 115,000 tonnes of waste in 2006 (520,000 million tonnes in place) and is expected to close in 2021 with an estimated capacity of 2.68 million tonnes of waste. Preliminary biogas modeling estimates that 504 m^3/hr of biogas at 50% methane is currently recoverable for capture and use, and that will rise to a peak of approximately 1,168m^3/hr shortly after closure in 2021. Project options include electricity generation or flaring.	75,187	Econ. Esteban Bernal (Empresa Municipal de Aseo de Cuenca), Roberto Urquizo (Ecuador Ministry of the Environment), Brian Guzzone (U.S. EPA Landfill Methane Outreach Program)

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	Name of Project (Location)	Description	Emissions Reductions (tCO_2Eq)*	Contact
India				
Poster and Flyer	Deonar Landfill (Mumbai, India)	Deonar sanitary landfill, opened in 1927, accepted approximately 1.45 million tonnes of waste in 2006 (9.2 million tonnes in place) and is expected to close in 2037 with an estimated capacity of 36.9 million tonnes of waste. Preliminary biogas modeling estimates that 4,251 m^3/hr of biogas at 50% methane will be recoverable for capture and use in 2009, and that will rise to a peak of approximately 4,580 m^3/hr shortly after closure in 2037. Project options include electricity generation or flaring.	210,107	R.A. Rajeev (Municipal Corporation of Greater Mumbai), M. Rajamani (Ministry of Urban Development), Rachel Goldstein (U.S. EPA Landfill Methane Outreach Program)
Poster and Flyer	Okhla Landfill (Delhi, India)	Okhla sanitary landfill, opened in 1994, accepts between 176,000 and 487,000 million tonnes of waste annually (5.6 million tonnes in place) and is expected to close in mid-2008 with an estimated capacity of 6.3 million tonnes of waste. Preliminary biogas modeling estimates that biogas recover will rise to a peak of 1,659 m^3/hr of biogas at 50% methane in 2008. Project options include electricity generation, direct use, or flaring.	55,824	P.K. Khandeval (Municipal Corporation of Delhi), M. Rajamani (Ministry of Urban Development), Rachel Goldstein (U.S. EPA Landfill Methane Outreach Program)
Poster and Flyer	Pirana Landfill (Ahmadabad, India)	The estimates of LFG recovery and utilization are currently under review. Please contact Rachel Goldstein at U.S. EPA if you are interested in getting a copy of the final report.	Not available	Jayantilal Makwana (Ahmadabad Municipal Corporation), M. Rajamani (Ministry of Urban Development), Rachel Goldstein (U.S. EPA Landfill Methane Outreach Program)
Mexico				
Flyer only	Atizapan Landfill (State of Mexico, Mexico	Atizapan sanitary landfill, opened in 1995, accepts approximately 160,600 tonnes of waste annually (1.99 million tonnes in place) and is expected to close in 2020 with an estimated capacity of 3.66 million tonnes of waste. Preliminary biogas modeling estimates that 1,274 m^3/hr of biogas at 50% methane will be recoverable for capture and use in 2009, and that is estimated to increase to a peak of approximately 1,566 m^3/hr shortly after closure in 2018. Project options include electricity generation or other direct use(s) of landfill gas.	93,887	Gerado Tinoco Hernandez (Municipality of Atizapan de Zaragoza) and Cesar Rafael Chavez Ortiz (Secretariat of Environment and Natural Resources -- SEMARNAT)
Flyer only	Cuautla-Morelos Landfill (Cuautla-Morelos, Mexico)	Cuautla-Morelos sanitary landfill, opened in 1999, accepts approximately 164,250 tonnes of waste annually (735,000 tonnes in place) and is expected to close in 2020 with an estimated capacity of 3.28 million tonnes of waste. Preliminary biogas modeling estimates that 842 m^3/hr of biogas at 50% methane will be recoverable for capture and use in 2009, and that will rise to a peak of approximately 1,676 m^3/hr in 2020. Project options include electricity generation or other direct use(s) of landfill gas.	79,749	Ing. Eduardo Uriaga Mendieta (Municipality of Cuautla) and Cesar Rafael Chavez Ortiz (Secretariat of Environment and Natural Resources -- SEMARNAT)

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	Name of Project (Location)	Description	Emissions Reductions (tCO_2Eq)*	Contact
Poster and Flyer	Ensenada Landfill (Ensenada, Mexico)	Ensenada sanitary landfill, opened in 1987 as an open dump and converted to a landfill in 1996, accepts approximately 100,000 tonnes of waste annually and closed in 2004 with 1.96 million tonnes in place). Preliminary biogas modeling estimates that 406 m^3/hr of biogas at 50% methane will be recoverable for capture and use in 2008, and biogas recovery is projected to decline after 2008. Project options include electricity generation, direct use, or flaring only.	18,862	Esperanza Diaz Lozano (Municipality of Ensenada), Cesar Rafael Chavez Ortiz (Secretariat of Environment and Natural Resources -- SEMARNAT), Victoria Ludwig (U.S. EPA Landfill Methane Outreach Program
Poster and Flyer	Nuevo Laredo Landfill (Nuevo Laredo, Mexico)	Nuevo Laredo sanitary landfill, opened in 1994, accepts approximately 175,000 tonnes of waste annually (currently 2 million tonnes in place) and is expected to close in 2010 with an estimated capacity of 2.62 million tonnes of waste. Preliminary biogas modeling estimates that 1,141 m^3/hr of biogas at 50% methane will be recoverable for capture and use in 2008, and that will rise to a peak of approximately 1,332 m^3/hr in 2011. Project options include electricity generation.	64,530	Luis Felipe Carrillo Neri (SEMARNAT) and Victoria Ludwig (U.S. EPA Landfill Methane Outreach Program)
Russia				
Flyer only	Kargashino Landfill (District of Mitishy, Russia)	Kargashino sanitary landfill, opened in 1987, accepts approximately 80,000 tonnes of waste annually (currently 1 million tonnes in place) and is expected to close in 2011 with an estimated capacity of 1.39 million tonnes of waste. Preliminary biogas modeling estimates that 456 m^3/hr of biogas at 50% methane is currently recoverable for capture and use, and that will rise to a peak of approximately 511 m^3/hr shortly after closure in 2011. Project options include electricity generation, direct use, or flaring only.	26,579	Municipal Company "Poligon" (District of Mitishy), Boris Fedorovich Reutov (Federal Agency on Science and Innovations), Chris Voell (U.S. EPA Landfill Methane Outreach Program)
Ukraine				
Poster and Flyer	Chernivtsi Landfill (Chernivtsi, Ukraine)	Chernivtsi sanitary landfill, opened in 1995, accepted approximately 82,467 tonnes of waste in 2006. The current landfill area is expected to close in 2012 with an estimated capacity of 1.3 million tonnes of waste. Preliminary biogas modeling estimates that 544 m^3/hr of biogas at 50% methane is currently recoverable for capture and use, and that will rise to a peak of approximately 696 m^3/hr shortly after closure in 2012. Project options include electricity generation, direct use, or flaring only.	37,778	Mykola P. Popadyuk (Chernivtsi City Administration), Tetiana Rybina (Ministry of Environment Protection of Ukraine), Chris Voell (U.S. EPA Landfill Methane Outreach Program)
Flyer only	L'viv Landfill (L'viv, Ukraine)	L'viv sanitary landfill, opened in 1959, accepted approximately 300,000 tonnes of waste in 2006 (10.1 million tones in place). The current landfill area is expected to close in 2008 with an estimated capacity of 10.4 million tonnes of waste. Preliminary biogas modeling estimates that 1,900 m^3/hr of biogas at 50% methane is currently recoverable for capture and use, and biogas recovery is projected to decline after 2008. Project options include electricity generation, direct use, or flaring only.	36,242	Taras Burhan (L'viv City Administration), Tetiana Rybina (Ministry of Environment Protection of Ukraine), Chris Voell (U.S. EPA Landfill Methane Outreach Program)

*Estimated average annual emissions reductions resulting from the proposed project.

	Name of Project (Location)	Description	Emissions Reductions (tCO_2Eq)*	Contact
Flyer only	Mariupol Landfill (Mariupol, Ukraine)	Mariupol sanitary landfill, opened in 1967, received approximately 172,300 tonnes of waste in 2006 (4.8 million tones in place). The current landfill area is expected to close in 2008 with an estimated capacity of 5.1 million tonnes of waste. Preliminary biogas modeling estimates that 1,543 m^3/hr of biogas at 50% methane is currently recoverable for capture and use, and that will rise to a peak of approximately 1,580 m^3/hr shortly after closure in 2008. Project options include electricity generation, direct use, or flaring only.	30,915	Ceorgiy Kornev (Mariupol City Administration), Tetiana Rybina (Ministry of Environment Protection of Ukraine), Chris Voell (U.S. EPA Landfill Methane Outreach Program)

OIL AND GAS

	Name of Project (Location)	Description	Emissions Reductions (tCO_2Eq)*	Contact
Mexico				
Poster only	Petroleos Mexicanos (PEMEX) Case Study (Mexico City, Mexico)	Petróleos Mexicanos (PEMEX) is a nationally owned oil and gas company, that not only supplies Mexico with oil products and natural gas, but also owns more than 3,000 facilities located throughout the national territory to either produce, refine, process, transport (land/water), store, and sell crude oil to other countries. This poster describes PEMEX's ongoing and planned activities.	Not available	Javier Bocanegra (PEMEX) or Roger Fernandez (U.S. EPA Natural Gas STAR Program)
Ukraine				
Poster only	Cherkasytransgas Case Study (Cherkassy, Ukraine)	Cherkasytransgas, a Ukrainian branch company of Ukrtransgas and one of Ukraine's largest natural gas transmission companies, operates six transit gas pipelines from Russia and Turkmenistan through Ukraine and into Western Europe. The company (Cherkasytransgas) transports annually about 120 billion cubic meters of natural gas through 11 regions of Ukraine through a 5,000 km network into Western Europe. This poster describes Cherkasytransgas' activities.	Not available	Olena Mandra (Cherkasytransgas) or Suzie Waltzer (U.S. EPA Natural Gas STAR Program)

*Estimated average annual emissions reductions resulting from the proposed project.