

# South Jordan Landfill

## Project Description

The South Jordan Landfill is a 200-acre sanitary MSW landfill in the Salt Lake area. It has been in operation for 50 years, with the project start date occurring in 2005 and lasting for 10 years. The project included a gas collection and control system (GCCS) comprised of an interconnected network of vertical extraction and horizontal wells connected via underground header piping to three separate Caterpillar 3520 (1.6 MW) generator engines. The landfill also has an open flare on site that was utilized before the engines were installed and was the original product destruction device.



<b>Project Type</b>	Landfill Gas Capture/Combustion
<b>Location</b>	South Jordan, Utah
<b>Registry/Protocol</b>	Climate Action Reserve (CAR): U.S. Landfill Project Protocol
<b>Third-Party Verifier</b>	Blue Source, LLC

**Sustainable Development Goals**



**Additionality**

As the premier carbon offset registry for the North American carbon market, the Climate Action Reserve (CAR), in which this project is registered under, employs a performance standard approach for determining additionality, whereby each landfill must satisfy two tests to be deemed 'beyond business as usual':

- The Performance Standard Test
- The Legal Requirements Test

The South Jordan Landfill passes these two tests set by CAR to satisfy the additionality eligibility rule because landfill gas was not destroyed prior to the project start date, and the landfill is not required by regulation, statute or otherwise to install a gas collection system.

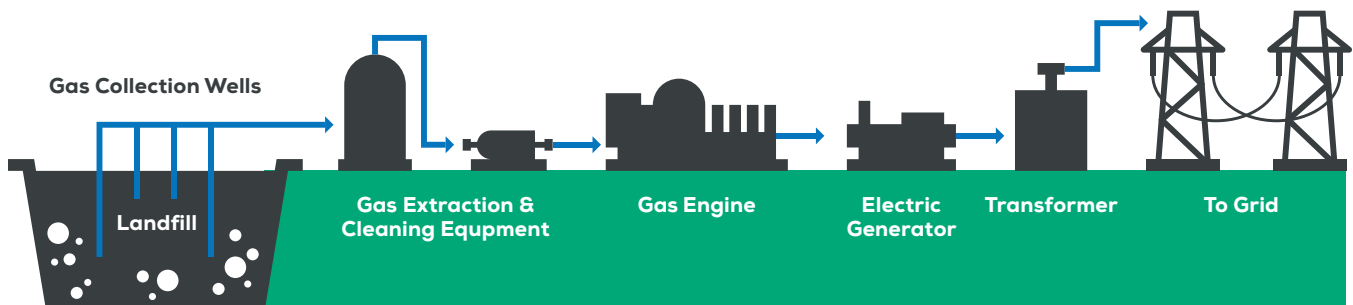
Hence, the installation and combustion of the methane at the site is voluntary, and this activity is additional.

**Co-Benefits**

In addition to a significant reduction in GHG emissions resulting from methane destruction, the project will provide the following multi-faceted co-benefits:

- Create construction, operations and maintenance jobs in the state
- Increase safety by avoiding methane migration, an issue that many older landfills encounter
- Control odors and destroy toxic compounds that can exist in landfill
- Reduces emissions of VOCs and other local pollutants
- Methane levels in groundwater are reduced, resulting in cleaner water and air
- Converts waste into energy, and is a top renewable energy source

**Landfill Gas System**



# Maple Hill Landfill

## Project Description

The Maple Hill Landfill began operations in 1976 and is located in Macon, Missouri. The landfill gas collection and control system was developed in four phases and consists of 26 vertical extraction wells and three leachate extraction points. The initial gas system was voluntarily installed and came online in September 2002. The gas from the wellheads is routed via a main header line into the flare skid after being pulled by a blower and passing through knockout vessels to remove moisture. The candlestick flare destroys the captured landfill gas, thus preventing it from escaping into the atmosphere as a greenhouse gas.

<b>Project Type</b>	Landfill Gas Capture/Combustion
<b>Location</b>	Macon, Missouri
<b>Registry/Protocol</b>	Climate Action Reserve (CAR): U.S. Landfill Project Protocol
<b>Third-Party Verifier</b>	SCS Global Services



Source: Element Markets, LLC

### Sustainable Development Goals



#### Additionality

As the premier carbon offset registry for the North American carbon market, the Climate Action Reserve (CAR), in which this project is registered under, employs a performance standard approach for determining additionality, whereby each landfill must satisfy two tests to be deemed ‘beyond business as usual’:

- The Performance Standard Test
- The Legal Requirements Test

The Maple Hill Landfill passes these two tests set by CAR to satisfy the additionality eligibility rule because landfill gas was not destroyed prior to the project start date, and the landfill is not required by regulation, statute or otherwise to install a gas collection system.

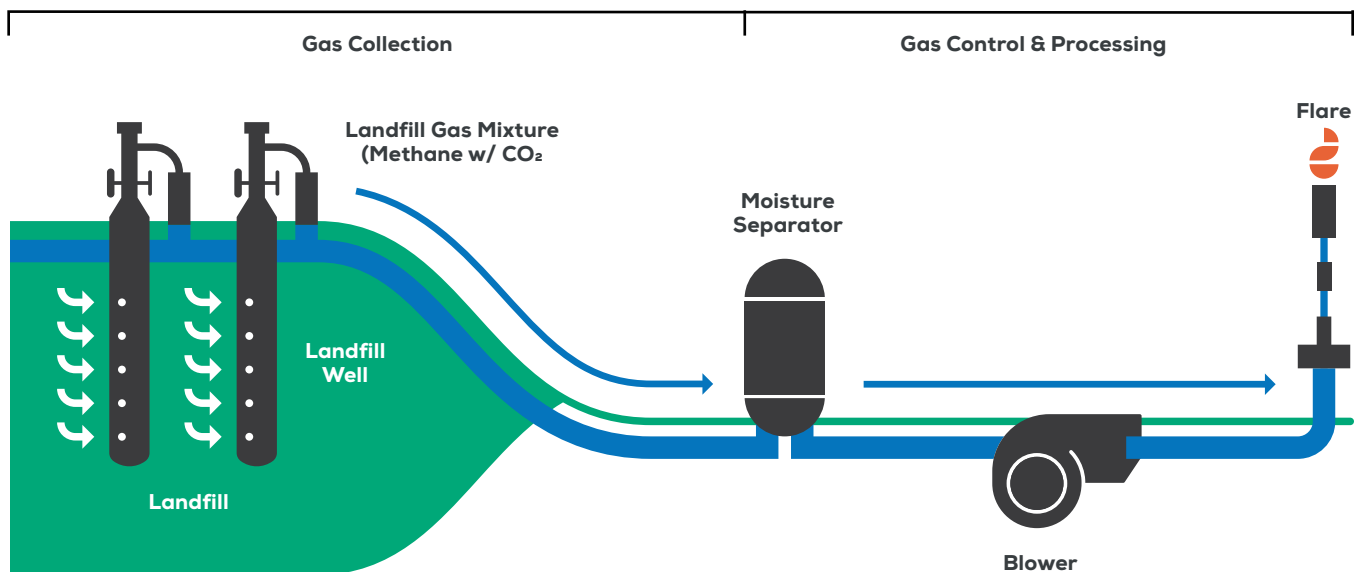
Hence, the installation and combustion of the methane at the site is voluntary, and this activity is additional.

#### Co-Benefits

In addition to a significant reduction in GHG emissions resulting from methane destruction, the project will provide the following multi-faceted co-benefits:

- Create construction, operations and maintenance jobs in the state
- Increase safety by avoiding methane migration, an issue that many older landfills encounter
- Control odors and destroy toxic compounds that can exist in landfills
- Reduces emissions of VOCs and other local pollutants
- Methane levels in groundwater are reduced, resulting in cleaner water and air

### Landfill Gas System



Source: Element Markets, LLC

# UPM Blandin

## Native American Hardwoods Conservation & Carbon Sequestration Project

### Project Description

UPM Blandin Paper Company is conducting improved forest management practices on 187,876 acres of land in northern Minnesota, initiated in part to mitigate climate change. 173,386 acres of this land are forested acres meeting American Carbon Registry (ACR) standard methodology and requirements. The Blandin forest has historically faced various acquisitions resulting in large-scale harvesting. In July of 2010, UPM Blandin signed a perpetual conservation easement of the forest, signaling the start of its forest management practices. Project activities include UPM's Smart Forestry practices maintaining the diversity of natural forest communities and aligning management with ecological regimes, as well as reducing harvesting impacts on the forest and mitigating climate change.



Photo: Richard Hamilton Smith

<b>Project Type</b>	Forest Carbon
<b>Location</b>	70 mile radius of Grand Rapids, MN
<b>Registry/Protocol</b>	American Carbon Registry (ACR): Forest Carbon Project Standard, Version 2.1
<b>Third-Party Verifier</b>	SCS Global Services



## Sustainable Development Goals



### Additionality

Under ACR standards, a project must establish that the activities are not 'business as usual', or that they are additional, by satisfying the "Three-pronged additionality test." A given project must demonstrate that it: (1) exceeds regulatory/legal requirements; (2) goes beyond common practice; and (3) overcomes at least one of the three implementation barriers: institutional, financial, or technical. In the area, GHG reduction activity is not required by any applicable or enforceable federal, state, or local law, regulation, ordinance, consent decree or other legal arrangement. Therefore, the conservation of native forest in this region is voluntary and this activity exceeds regulatory/legal requirements.

The third party verifier sufficiently demonstrated in the GHG Project Plan and through the verification process that as of the project start date, the project activities exceed enforced laws and regulations, exceed common practice in the geographic region and forest type, and faced a financial implementation barrier.

### Co-Benefits

UPM Blandin's project is much more than a generator of credits. By implementing conservation measures and fostering carbon sequestration, it is helping to bend the climate curve, restore species habitat, clean the water, and support the local and global economy. In addition to reducing GHG emissions, the project will provide the following co-benefits:

- Protects forest ecosystems including both land and water in the Northern Minnesota region
- Preserves and conserves timber for future generations
- Provides a critical habitat for rare species such as the northern long-eared bat and the golden winged warbler
- The project area has Sustainable Forestry Initiative (SFI) certification and a conservation easement demonstrating high quality, sustainable management
- Blandin allows public access for recreational use of property, fostering a space for snow-mobiling, cross-country skiing, bird watching, berry picking, hiking and snow-shoeing