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Natural Gas STAR Methane Challenge Program
Implementation Plan

Partner Name

Kern River Gas Transmission Company

Current as of (date)

Apr 19, 2019

Partner Implementation Manager

Name: _____

Title: _____

Address: _____

City/State/Zip: _____

Telephone/Fax: _____ E-mail: _____

Partner Methane Challenge Commitments[1]

BMP Commitment Option

	Source	Start Date	Achievement Year
	Onshore Production		
☐	Pneumatic Controllers		
☐	Fixed Roof, Atmospheric Pressure Hydrocarbon Liquid Storage Tanks		
	Gathering and Boosting		
☐	Pneumatic Controllers		
☐	Fixed Roof, Atmospheric Pressure Hydrocarbon Liquid Storage Tanks		
☐	Reciprocating Compressors - Rod Packing Vent		
☐	Centrifugal Compressors - Venting		
	Natural Gas (NG) Processing		
☐	Reciprocating Compressors - Rod Packing Vent		
☐	Centrifugal Compressors - Venting		
	NG Transmission & Underground Storage		
☐	Reciprocating Compressors - Rod Packing Vent		
☐	Centrifugal Compressors - Venting		
■	Transmission Pipeline Blowdowns between Compressor Stations	Sep 29, 2016	2021
☐	Pneumatic Controllers		
	NG Distribution		
☐	Mains – Cast Iron and Unprotected Steel *(Commitment Rate:)*		
☐	Services – Cast Iron and Unprotected Steel		
☐	Distribution Pipeline Blowdowns *(Commitment Rate:)*		
☐	Excavation Damages		

Partner Methane Challenge Commitments

ONE Future Emissions Intensity Commitment Option

Segment:		Intensity Target:		Target Year:	

[1] Partners may delete unused rows within the table, and may duplicate rows and add relevant details as needed (e.g., a corporate parent partner that has different commitments for each LDC can duplicate relevant rows to list the commitments for each LDC).

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1.0 Introduction

In March 2014, the White House released its *Strategy to Reduce Methane Emissions,* which included efforts by the Environmental Protection Agency (EPA) to reduce methane emissions from the oil and natural gas sector. In January 2015, the Obama administration announced a new goal to cut methane emissions from oil and natural gas by 40-45% from 2012 levels by 2025. In response, the EPA created the voluntary Natural Gas STAR Methane Challenge Program. This program provides a mechanism through which oil and gas companies can make and track commitments to reduce methane emissions and will allow a platform for partner companies to showcase their efforts to reduce methane emissions, improve air quality, and capture this valuable energy resource.

On March 23, 2016, Kern River Gas Transmission Company (Kern River), MidAmerican Energy Company (MEC), and Northern Natural Gas (NNG) committed to the EPA to be founding partners in this program. Partners are publicly recognized as leaders in reducing methane emissions in the U.S. Joining as a partner demonstrates a company’s concern for the environment and commitment to: moderate climate change, improve air quality and conserve a non-renewable energy resource (natural gas). It also supports the environmental RESPECT principles that guide our corporate commitment to the environment and will assist us in the continuous improvement of our environmental performance and in meeting company scorecard goals.

1.1 Purpose

This document is prepared and modeled after requirements outlined in the EPA Natural Gas STAR Methane Challenge Program Implementation Plan Guidelines. This plan has been prepared in response to the Natural Gas STAR Methane Challenge Program.

1.2 Background

Kern River operates an interstate natural gas pipeline extending from the oil and gas producing fields of southwestern Wyoming through Utah and Nevada to the San Joaquin Valley near Bakersfield, California. This pipeline was constructed and put into service in February, 1992, and has a design capacity of 2.167 billion cubic feet per day. Kern River's system totals 1,717 miles of primarily 36-inch and 42-inch diameter steel pipe buried at least three feet underground. Kern River operates 11 automated compressor stations spread across three states.

Kern River has been successful in implementing methane reduction initiatives since mid-2015, which have a positive impact on the environment. In addition to the environmental benefits, reduction in methane emissions reduces unaccounted-for gas loss (UAF), which ultimately reduces the overall fuel costs to our customers. Through these initiatives, Kern River conserved approximately 84.2 million standard cubic feet of methane and has saved shippers approximately $195,235 in UAF costs, based on historical natural gas market value, since 2015.

Pneumatic devices powered by pressurized natural gas are widely used throughout pipeline systems. As part of normal operation, these devices release or bleed natural gas to the atmosphere. Kern River Gas Transmission Company utilizes only low-bleed or no-bleed devices at all of its compressor stations. When maintenance is required on a natural gas pipeline, natural gas must be reduced in the mainline in order to ensure safe working conditions. Kern River Gas Transmission Company has used many techniques to minimize the amount of gas that is vented, including using in-line compressors and hot taps.

Kern River Gas Transmission Company conducts ground leak detection surveys. This program has successfully identified small leaks on the system that otherwise may have gone undetected for longer periods of time. Identified leaks are responded to quickly and mitigation plans implemented as soon as possible.

All centrifugal compressors installed at Kern River Gas Transmission Company compressor stations utilize dry seals. Wet seal centrifugal compressors have never been used at Kern River Gas Transmission Company stations.

2.0 Contact Information

2.1 Methane Challenge Implementation Manager

Callee Butcher, Manager, Land and Environment, is the Methane Challenge Implementation Manager for Kern River.

3.0 Methane Challenge Commitments

3.1 Commitments

As specified in the Natural Gas STAR Methane Challenge Program: Partnership Agreement for Best Management Practice (BMP) Commitment between the EPA and Kern River, Kern River has agreed to maximize blowdown gas recovery and/or emission reductions through utilization of one or more of the below options to reduce methane emissions from non-emergency blowdowns by at least 50% from total potential emissions each year. Total potential emissions equals calculated emissions from all planned maintenance activities in a calendar year, assuming the pipeline is mechanically evacuated or mechanically displaced using non-hazardous means down to atmospheric pressure and no mitigation is used. These commitments will be achieved through following this implementation plan. Mitigation options to maximize emission reductions during blowdowns between compressor stations include:

• Route gas to an in-line compressor for beneficial use, or

• Route gas to a flare, or

• Route gas to a low-pressure system by taking advantage of existing piping connections, temporarily resetting or bypassing pressure regulators to reduce system pressure prior to maintenance, or installing temporary connections to reduce pressure, or

• Utilize hot tapping, a procedure that makes a new pipeline connection while the pipeline remains in service, flowing natural gas under pressure, to reduce the volume of blow down gas.

3.2 Timeframe for Meeting Commitments

BMPs to reduce methane emissions associated with transmission pipeline blowdowns between compressor stations will be implemented company-wide no later than September 29, 2016. This commitment will be completed no later than the year 2021.

4.0 Milestones and Associated Timeframes

• Revise O&M procedure 35.02.01 Air Quality Compliance require pipeline segments be evacuated prior to construction activities whenever possible. Conduct training on the revised operating procedure for engineering and operations managers and engineering staff. Responsible: Environmental staff Due date: September 31, 2016

- Identify and prioritize planned construction activity that will require pipeline segments to be evacuated. Responsible: Engineering and operations managers Due date: Annually by December of the prior year

- Determine cost effective methods, either hot taps, portable compression or pressure reduction, to minimize volumes vented for planned activity requiring evacuation

Responsible: Engineering and operations staff Due date: Prior to activity initiation

- Ensure project schedules allow for additional time to complete hot tap installation, portable compression or pressure reduction methods during construction and outage windows
Responsible: Gas control, operations and engineering staff Due date: Prior to activity initiation

- Estimate and document reduction in volumes released based off of pipe volume and conditions at the time of the reduction activity Responsible: Operations, monitoring and measurement, and environmental staff Due date: Within 3 business days of the reduction

- Review success of the reduction program and recommend improvements for future efforts
Responsible: Environmental manager Due date: Annually by December 31