



# Natural Gas STAR Methane Challenge Program: Proposed Framework



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## Addressing U.S. Oil and Gas Methane Emissions

EPA is proposing the voluntary Natural Gas STAR Methane Challenge Program (“Methane Challenge”), which would provide a new mechanism through which companies could make and track ambitious commitments to reduce methane emissions. The Program is based on extensive stakeholder outreach<sup>1</sup> and reflects a revision of EPA’s previously proposed framework for an enhanced voluntary partnership in the oil and gas sector. While tremendous progress has been made during the last 20 years through the Natural Gas STAR Program, significant opportunities remain to reduce methane emissions, improve air quality, and capture and monetize this valuable energy resource. The proposed Methane Challenge Program will create a platform for leading companies to go above and beyond existing voluntary action and make meaningful and transparent commitments to yield significant methane emissions reductions in a quick, flexible, cost-effective way.

This document represents the next step in EPA’s ongoing work with stakeholders to design and launch a new, ambitious voluntary program. EPA is interested in stakeholder feedback on all aspects of the Methane Challenge proposal as well as how best to align the Program with other Administration efforts to reduce emissions. Highlighted at the end of this document are several specific areas where feedback would be particularly appreciated.

The Methane Challenge Program is an integral part of the EPA’s – and the Administration’s -- ongoing commitment to address methane emissions and global climate change. In March 2014, the White House released the *Strategy to Reduce Methane Emissions* that included EPA efforts to reduce methane emissions in the oil and natural gas sector.<sup>2</sup>

In January 2015,<sup>3</sup> the Obama Administration further demonstrated its commitment by announcing a goal to cut methane emissions from this sector by 40-45 percent from 2012 levels by 2025. EPA and other federal agencies are pursuing a series of regulatory and voluntary steps to put us on a path toward the 2025 goal. The agency plans to build on its 2012 New Source Performance Standards for the oil and natural gas industry to achieve both methane reductions and additional reductions in VOCs. EPA also plans to extend VOC reduction requirements to existing oil and gas sources in areas that could particularly benefit from VOC reductions: ozone nonattainment areas and states in the Ozone Transport Region. The agency will do this by issuing Control Techniques Guidelines (CTGs) that provide an analysis of the available, cost-effective technologies for controlling VOC emissions from covered oil and gas sources.<sup>4</sup> Many controls to reduce VOCs also reduce methane as a co-benefit.<sup>5</sup>

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<sup>1</sup> In the first half of 2015, EPA met with industry associations, individual oil and gas companies, industry-led initiatives, NGOs, other federal agencies (including Department of Energy and Department of Transportation), EPA regions, and states to gain feedback and participation in the design of this new approach. The Downstream Initiative group of natural gas distribution companies has been particularly engaged and constructive in proposing possible structures for the program and providing extensive feedback on program options.

<sup>2</sup> “Climate Action Plan,” <https://www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf>

<sup>3</sup> “Administration Takes Steps Forward on Climate Action Plan by Announcing Actions to Cut Methane Emissions,” <https://www.whitehouse.gov/the-press-office/2015/01/14/fact-sheet-administration-takes-steps-forward-climate-action-plan-anno-1>

<sup>4</sup> CTGs apply in ozone nonattainment areas that are classified as moderate and above, and throughout the states in the Ozone Transport Region.

<sup>5</sup> EPA has received feedback from industry stakeholders to consider structuring any future Control Technique Guidelines (CTGs) in such a way that would provide incentives for early voluntary action.



The Methane Challenge Program will complement these regulatory actions, providing incentives and opportunities for companies to undertake and document ambitious voluntary methane emission reductions, principally from existing methane emission sources. Voluntary efforts to reduce emissions in a comprehensive and transparent manner hold the potential to realize significant reductions in a quick, flexible, cost-effective way.

EPA recognizes the potential overlap for coverage of this program with forthcoming regulatory actions, including emission sources that could be covered under CTGs, and emissions sources on federal lands, which are being evaluated for potential regulations by the Bureau of Land Management. EPA appreciates that companies in some segments of the industry may face uncertainty until these actions are finalized. Nonetheless, EPA believes that there is interest from leading companies to make meaningful commitments and the proposed Methane Challenge Program provides a platform for these actions, particularly those not covered in the regulations.

### **Relationship to the Natural Gas STAR Program and Gas STAR Gold**

Since 1993, EPA’s Natural Gas STAR Program has successfully collaborated with the oil and natural gas industry on implementation of cost-effective methane emission reduction technologies and practices. To join Natural Gas STAR, partner companies commit to evaluating their operations to identify opportunities to reduce methane emissions, and to implement and report on their progress. Gas STAR partners have identified and implemented over 50 specific cost-effective technologies and practices throughout the oil and natural gas value chain. Through 2013, Gas STAR partner companies have reported voluntary methane emission reductions of over one trillion cubic feet (over 400 MMTCO<sub>2e</sub>).

The Methane Challenge Program will expand on Natural Gas STAR by creating a structure through which companies can make specific, ambitious voluntary commitments and annually submit data and information through Subpart W of the Greenhouse Gas Reporting Program (with some supplemental voluntary reporting) to transparently track progress. This is a significant departure from Natural Gas STAR, in which partner companies make a general commitment, participate at a range of levels (e.g., company-wide to facility or regional level), and only report information on emission reduction actions. In this way, the Methane Challenge Program provides a platform for companies that truly want to excel and differentiate themselves. The two hallmarks of the proposed program - ambitious commitments and transparency – will facilitate information sharing about accomplishments and progress made. Thus, the program can serve as a catalyst for broad industry adoption of best practices to reduce emissions.

The Methane Challenge proposal also seeks to balance ambitious voluntary commitments with appropriate flexibility. In response to EPA’s 2014 Gas STAR Gold proposal, which outlined a certification-type program where facilities could adopt a comprehensive set of emission-source protocols to achieve “Gold” certification, many companies emphasized the need for greater programmatic flexibility. The feedback received on the Gas STAR Gold proposal, which EPA is not moving forward with, has resulted in this new Methane Challenge approach to an expanded voluntary program. Rather than a facility focus that was the basis of the Gas STAR Gold approach, the Methane Challenge Program proposal emphasizes company-wide commitment options. The proposed Methane Challenge Program incorporates flexibility into several program elements, including implementation timeframes to inspire ambition in a structure that is achievable.

EPA plans to maintain the Natural Gas STAR Program and to continue activities such as annual reporting of emission reduction activities and technology transfer workshops. For current Natural Gas STAR



partners that join the Methane Challenge, EPA would work with them to determine how and/or if they will participate in each program, in order to allow appropriate recognition and avoid duplication of efforts in reporting to each program.

### Goals of the Methane Challenge Program

Through the Methane Challenge Program, EPA is proposing to recognize leading companies that make voluntary, transparent commitments to increased action to reduce methane emissions from their operations. The key objectives of the proposed Program would be to achieve the following:

- Encourage and support ambitious industry commitments to significantly reduce methane emissions
- Offer flexible mechanisms to achieve stated commitments
- Promote innovative approaches to emissions measurement, monitoring and reduction technologies and practices
- Provide accountability and transparency for making and achieving commitments through robust annual data reporting that utilizes EPA's Greenhouse Gas Reporting Program (GHGRP) to the maximum extent possible
- Recognize progress of companies that have been proactive in reducing methane emissions
- Recognize improved environmental performance through quantitative assessment of reductions in emissions.

### Methane Challenge Program Structure

The Methane Challenge Program would invite companies with operations throughout the natural gas value chain – onshore production, gathering and boosting, processing, transmission, storage, and distribution segments – and in onshore oil production to commit to action under the Challenge. EPA has three primary criteria for recognizing companies as partners under this Program; company commitments should (1) be ambitious and achieve meaningful methane reductions across company operations; (2) be transparent with the ability to track and account for progress, and (3) demonstrate continuous improvement over time. EPA is proposing that companies participating in the Methane Challenge would have the opportunity to choose from two options<sup>6</sup> to reduce methane emissions from their operations:

- Best Management Practice (BMP) Commitment
- One Future Emissions Intensity Commitment

By signing up to either or both of these commitments, companies would become recognized partners in the Methane Challenge Program. The BMP commitment option is intended to drive near-term, widespread implementation of methane mitigation activities from key methane emission sources throughout the industry. Formed in 2014, the One Future program is an existing industry-led partnership through which companies make ambitious commitments to achieve methane emission intensity targets based on program-defined sector-specific emission rates<sup>7</sup>. Both options represent expanded, transparent voluntary commitments by partner companies that will drive further voluntary action to reduce oil and gas methane emissions. By recognizing both of these commitment options

<sup>6</sup> Companies could also opt to sign up for both commitment options.

<sup>7</sup> EPA is not a formal member of One Future, but is proposing to support this industry-led effort. EPA applauds the strong commitment to reduce methane and believes that providing this linkage to Methane Challenge will facilitate the achievement and tracking of any reductions associated with this effort.



under the Methane Challenge Program, EPA seeks to promote adoption of expanded voluntary methane emission commitments while offering flexibility to allow companies to select the path that best fits with their capabilities and corporate priorities in reducing emissions.

To become a partner, individual companies would enter into agreements with EPA (e.g. via a memorandum of understanding (MOU)) to document their respective commitments. The MOU would also cover specific interactions with EPA, including reporting of baseline and mitigation activities through the GHGRP and supplemental data collection mechanisms. EPA is proposing that, within six months of joining the Methane Challenge Program, all partner companies would also develop an Implementation Plan to detail key aspects of their planned participation, such as anticipated rate of progress, key milestones, and context for their implementation plans (e.g., referencing work to be done during the next planned shutdown of a facility).

As part of their commitment, partners would track their progress through a transparent public mechanism (e.g., data system and website). EPA is proposing to leverage the significant amount of data reported by facilities to the Petroleum and Natural Gas Systems source category (Subpart W) of the GHGRP, plus voluntarily supplied supplemental data (as needed), to serve as the basis for tracking specific company actions. On an annual basis, the Program will compile relevant data from partner companies and release it publicly in order to transparently reflect individual company progress in meeting commitments.

Table 1. Process for Company Engagement

Key Steps	BMP Commitment	One Future (OF) Commitment
<b>Join Program</b>	Sign MOU with EPA covering source commitments, timing and agreement to submit data to Methane Challenge program	Sign MOU with OF covering commitments and timing; sign MOU with EPA agreeing to submit data to Methane Challenge Program
<b>Announce Commitments</b>	Company and commitments listed on Methane Challenge website	Company listed on Methane Challenge website with link to commitments, as listed on OF website
<b>Submit Implementation Plan</b>	Submit to EPA, with key milestones, six (6) months after joining program	Submit to OF and EPA, with key milestones, six (6) months after joining program
<b>Establish Baseline</b>	Not applicable	2012 supplemental data provided to Methane Challenge reporting mechanism to establish baseline (per EPA-specified data collection methodologies)
<b>Annual Reporting</b>	Submit voluntary supplementary data via Methane Challenge reporting mechanism (covered sources only)	Submit voluntary supplementary data via Methane Challenge reporting mechanism
<b>Annual Progress Tracking</b>	Source-specific data (activity and emissions) rolled up at company level and provided on Methane Challenge website	Company listing on Methane Challenge website links to company emissions intensity progress on OF website
<b>Data Transparency<sup>8</sup></b>	GHGRP data and voluntary data made available publicly	GHGRP data and voluntary data made available publicly

<sup>8</sup> To help promote transparency and visibility of the Methane Challenge Program and its member commitments, EPA envisions publicly releasing data voluntarily submitted to the Methane Challenge Program. In addition, EPA



## Best Management Practice (BMP) Commitment Option

Under this option, companies would commit to company-wide implementation of best practices to reduce methane emissions from key sources by a future date, as determined by the partner company. EPA would provide sector-specific lists of key methane emission sources and corresponding best management practices (BMPs). Partner companies would address one or more of these sources, and would designate the timing for achieving company-wide implementation of related BMPs. Companies could set different timelines for each source, as appropriate to their historic progress and anticipated ability to meet commitments. However, to drive action to reduce emissions in the near term, EPA is proposing that timing for full completion of commitments should not exceed five (5) years from the commitment date, and that commitments should include interim milestones (e.g. on an annual basis) to ensure steady progress towards full completion by the commitment date. EPA encourages companies to complete commitments in a shorter timeframe when appropriate. Companies would annually report on mitigation actions implemented and the program would track emissions reductions achieved as a result of voluntary actions taken.

### *Scope*

EPA has identified key emission sources (see Appendix 1) based on their contribution to national emissions and stakeholder interest in addressing those sources through a voluntary program. For each source, EPA would identify one or more BMPs to achieve mitigation commitments (see Appendix 2). Offering multiple BMPs (mitigation options) for each source would provide flexibility for partner companies to select activities and technologies that are best for their operations. To encourage innovation, EPA would consider additional mitigation activities for potential inclusion in the BMP option as data becomes available or upon request for consideration from partner companies. EPA will also consider adding new sources in the future.

EPA is proposing recommendations on how to define the organizational structure or level at which companies would make their Methane Challenge commitments. Companies have provided feedback that the ability to undertake widespread implementation of BMPs can vary, and corporate-wide commitments may not always be feasible. EPA seeks to define company commitments that find the appropriate balance of covering a significant portion of operations, while also defining a scope that is appropriate for widespread implementation of best practices. EPA's proposed organizational levels for establishing Methane Challenge commitments are provided in Appendix 3.

EPA has also received feedback that there may be operational circumstances or other conditions that could limit comprehensive implementation of BMPs for a given source. EPA is seeking feedback on the possibility of allowing partners to request an exemption to full implementation for each source commitment. Such exemptions could be considered on the condition that the exempted sources (basically, those for which a mitigation option is not implemented) would not represent a significant portion of methane emissions from that source, and would be transparently documented in annual results to provide context for company achievements. EPA is requesting feedback on whether to include this potential exemption option and, if so, how to structure it.

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would publish data submitted to the GHGRP as part of reporting under 40 CFR Part 98 that has not been determined to be confidential business information per GHGRP rulemakings.



### *Benefits and Considerations*

The BMP option offers the opportunity for partner companies to demonstrate comprehensive action to address methane emissions from key emitting sources. This option provides flexibility for companies in several ways: (1) to focus their commitment on one or more sources; (2) to establish the implementation timeframe, including relevant milestones as well as the target year for company-wide implementation of best practices; and (3) to select from BMP options that are affiliated with each source.

Companies that have already made significant progress in implementing BMPs prior to joining the Methane Challenge program (for example, because of their participation in the Natural Gas STAR Program) would be able to demonstrate that progress through the annual reporting process, and through the selection of a shorter timeframe for achieving company-wide implementation of best practices. In such a scenario, while these companies would be recognized for their progress in implementing BMPs, the commitments may not result in significant additional reductions in methane emissions. EPA seeks feedback on specific program design options that encourage partners to make source-specific commitments that would recognize progress and yield significant additional emission reductions. For example, the Program could specify that partner companies initially choosing to focus on a single source would agree to add another source to their commitment within three years of joining the Program. EPA requests feedback on how to structure the BMP option such that companies would be incentivized to regularly update commitments to continuously improve performance over time.

### **One Future Emissions Intensity Commitment Option**

ONE Future is an existing industry program administered by ONE Future, Inc., which is a 501(c)(6) entity<sup>9</sup>. It is a coalition of companies from across the natural gas industry focused on identifying policy and technical solutions that yield continuous improvement in the management of methane emissions associated with the production, processing, transmission and distribution of natural gas. One Future companies make a commitment to achieve a specified average rate of emissions intensity across all facilities within a specific segment by 2025. Each company has the flexibility to determine the most cost-effective pathway to achieve that goal – and agrees to demonstrate progress according to specific reporting protocols<sup>10</sup>. One Future companies have encouraged EPA to incorporate their approach into the Methane Challenge Program and have expressed their support for ambitious commitments and transparent tracking mechanisms that are hallmarks of the proposed program.

Partner companies choosing to adopt One Future’s emissions intensity targets are making commitments that are congruent with EPA’s goals in terms of ambition and transparency of commitments. Therefore, EPA proposes to recognize these companies’ efforts as partners in the Methane Challenge program. Companies opting for this commitment would join the One Future partnership and, in doing so, agree to provide relevant supplemental data to EPA to demonstrate their methane emission reduction actions. EPA would recognize ONE Future participants’ commitments and provide a reporting platform for transparently tracking company progress against commitments.

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<sup>9</sup> <http://www.onefuture.us/>

<sup>10</sup> EPA would work in collaboration with One Future to develop reporting protocols.





### *Scope*

Companies selecting this option would engage directly with One Future to establish their specific company-wide commitment and determine the organizational structure or level at which companies will make their commitments.

### *Benefits and Considerations*

A benefit to selecting to join One Future is that companies making this commitment have full flexibility to select the mix of emission reduction activities they will undertake to achieve their goal. The design also allows for changes in operations (e.g. acquisitions, divestments) without having to adjust a baseline. Since the commitment is focused on intensity-based goals, it implicitly includes recognition of historic action to reduce methane emissions.

A potential issue could be the possibility that companies are already near their target intensity, and their commitments therefore would not yield significant additional methane emission reductions. Therefore, EPA seeks feedback on how partner companies participating through the One Future option could be incentivized to continuously improve performance by reducing emissions below levels necessary to achieve One Future's target, if appropriate.

### **Other Potential Commitment Options**

While EPA is proposing the two options above for stakeholders to participate in this new Methane Challenge Program, we have also heard some interest in offering a third commitment option: the Emission Reduction (ER) Commitment. That type of approach is favored by some companies and offers the benefit of flexibility for companies that want to select the mix of sources they will address. EPA has not developed it as a full option at this time because, as described below, there are significant challenges with implementing this approach. However, given the interest in this approach that some have expressed, we welcome feedback on more fully developing this option contingent on addressing the identified challenges and having strong industry support.

### *Commitment*

If the ER commitment option is included within the Methane Challenge Program, companies selecting it would commit to reducing their methane emissions by a certain percentage from an agreed company-wide emissions baseline by a future date (to be determined by company). EPA would propose a minimum percentage reduction in company-wide methane emissions that companies would need to meet, and partner companies could choose that commitment target, or select a higher percentage. Companies would also indicate the year in which they anticipate achieving their target reduction rate. All participating companies would set targets from a common baseline established by EPA, which could be, for example, the average of 2013-2014 GHGRP Subpart W data, plus any supplemental data needed to complete the baseline information. These two years provide a recent data set, which would facilitate the provision of any retroactive supplemental data. Using the average of two years of data may help smooth any emissions fluctuations.

### *Scope*

It is anticipated that this commitment option could be undertaken at the corporate level, but EPA seeks comment from companies with a strong interest in this option with respect to the organizational level or structure at which companies would make this commitment.



### *Benefits and Considerations*

The ER commitment option would offer partner companies full flexibility to determine the exact mix of mitigation options they would implement to achieve their reduction commitments. By specifying an actual target, it would also drive emission reductions.

However, EPA has identified a number of challenges to implementing this approach:

- Any changes to a company’s operations would need to be accounted for in an adjusted baseline, and tracking and adjusting the baseline operations and emissions could present a significant challenge, particularly in the upstream sector where acquisitions and divestitures of assets occur on a regular basis.
- EPA has already received feedback that an ER commitment could be problematic for companies that seek to expand their operations.
- Some stakeholders mentioned that the inclusion of voluntary supplemental data (e.g. for facilities below the GHGRP’s reporting threshold of 25,000 metric tons CO<sub>2</sub>e per year) will mean that companies participating in the Program may show higher total emissions levels relative to their counterparts who are not participating in the Program.

### **Tracking Methane Challenge Program Progress**

One of the principal goals of the Methane Challenge Program is to transparently demonstrate partner company commitments and progress related to implementing mitigation options and reducing methane emissions from key methane sources throughout the oil and natural gas value chain. Therefore, all Methane Challenge partner companies would report on their voluntary mitigation actions that contribute to their commitments through a public platform managed by EPA. EPA also aims to minimize the reporting burden, to the extent possible, such that partner companies can focus time and resources on the actual implementation of methane-reducing activities. Because relevant oil and gas data are already collected by Subpart W of the GHGRP, EPA proposes to rely heavily on GHGRP Subpart W data to track progress in meeting commitments under the Methane Challenge Program.

Subpart W of the GHGRP already collects most of the information that would be relevant to tracking Methane Challenge Program commitments at the company level. However, it is anticipated that participating companies may need to provide some supplementary, voluntarily-supplied data to comprehensively track progress against their stated commitments. For example, voluntary supplementary data would be needed to show progress for facilities that do not report to the GHGRP because their emissions are less than the GHGRP reporting threshold of 25,000 metric tons CO<sub>2</sub>e, or for sources or mitigation activities not currently reported to the GHGRP.<sup>11</sup> Also, because the Methane Challenge Program is intended to incentivize and recognize voluntary actions, EPA is considering whether and how to collect supplementary data that enables the Program to distinguish company actions that are driven by regulation from those that are undertaken voluntarily in non-regulated environments or that go beyond regulatory requirements.

As part of the Methane Challenge Program implementation, EPA would provide a mechanism for companies to voluntarily report data elements that underpin their Program commitments. Though the exact mechanism is still under evaluation, EPA would create a streamlined reporting system that collects

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<sup>11</sup> For example, stakeholders in the distribution sector have indicated interest in potentially addressing emissions from distribution pipeline blowdowns and reporting the use of cast iron pipe liners, both of which are currently not reported to the GHGRP.



supplemental data needed to demonstrate progress against commitments and uses similar references and language as the current reporting forms used for collecting GHGRP data, in order to create a user-friendly system for reporting of voluntary data.

On an annual basis, relevant data on specific company actions (e.g. GHGRP data and voluntary supplementary data) would be rolled up to the partner company level to show progress against commitments.

- **BMP option:** activity and emissions data for the sources being targeted by the partner company would be presented on the Methane Challenge Program website. The website would list the partner company, its commitments, and annual data showing the activity data and emissions levels for the target sources, allowing for tracking of progress and emission reductions year on year.
- **One Future option:** the One Future program would use activity and emissions data reported into the Program (via GHGRP and supplementary data) to show company progress on the One Future website.<sup>12</sup>
- **ER option:** if it is adopted, the Methane Challenge Program website would show partner company commitments, and on an annual basis would roll up total emissions, in order to show year-to-year progress toward meeting the reduction goal.

Note that supplemental emissions data would be needed for all sources for the One Future or ER commitment options. For the BMP option, partners will provide supplemental data only for sources that have been selected by the company (e.g. if a partner chooses to focus on pneumatics and reciprocating compressors, the company will need to provide supplemental data only for those sources). The One Future and ER commitment options would also need this supplemental data provided for past year baseline emissions data.

To help promote the transparency and visibility of the Methane Challenge Program and of its member commitments and achievements, EPA envisions publicly releasing voluntarily submitted data. In addition, EPA would publish data submitted to the GHGRP as part of reporting under 40 CFR Part 98 that has not been determined to be confidential business information per GHGRP rulemakings.

## Recognition

EPA’s goal in proposing the Methane Challenge Program is to balance providing incentives for ambitious commitments with appropriate flexibility to ensure that companies are confident in their ability to meet those commitments. EPA also strives to achieve the appropriate level of ambitious commitment in the Methane Challenge Program that facilitates industry participation while recognizing the efforts of companies that have gone “above and beyond” business as usual. EPA considers the commitments to have intrinsic merit, and therefore is not proposing a tiered system to “rank” commitments by partner companies. The options are designed with manageable first steps for partner engagement. The BMP option allows for expansion of commitments over time as appropriate to an individual company’s ability to take on further reduction activities. The One Future option provides significant flexibility for participating companies committed to achieving its ambitious, performance-based target. EPA encourages feedback on potential recognition of outstanding performance in reducing emissions and/or achieving commitment goals, for example by setting aggressive timelines for completing a significant

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<sup>12</sup> The Methane Challenge Program website would list all participating companies. For companies participating in One Future, external links would be provided to the One Future website, which will track company progress on an on-going basis.



amount of mitigation actions. EPA is particularly interested in how to encourage companies to continue expanding the scope of their commitments to the extent they have already made significant progress. For example, partner companies could be recognized for achieving continuous improvement through expansion of program participation and commitment levels over time.

### **Continuous Improvement**

EPA will strive to promote continuous improvement in the Methane Challenge Program. Partner companies would have the opportunity, and would be encouraged, to expand their commitments at any time. This would allow for continued growth of emissions reductions and implementation of mitigation activities as companies make progress in reaching existing commitments.

EPA is interested in potential mechanisms that would allow for continuous improvements in the Program over time in order to address the greatest emission reduction opportunities and help to contribute to the Administration’s 2025 methane reduction target. For example, the Program will seek to encourage new and innovative BMPs, as well as methodologies for monitoring and measuring progress. At the launch, the Program would have basic agreement and understanding with partners about the BMPs to choose from to meet commitments, based on known mitigation activities already implemented in oil and gas operations. This would underpin the list of acceptable mitigation practices associated with each source in the BMP commitment option, as well as any supplemental data elements that would need to be collected to support partner company reporting of specific mitigation actions for the One Future or ER option. The final Methane Challenge Program document will outline a process for partner companies to alert EPA to any new “pilot” mitigation activities that they are testing, to potentially include these activities in the Program if they prove to be at least as effective as mitigation activities already recognized by the Program.

In support of the Methane Challenge Program’s goal of promoting continuous improvement, the EPA will coordinate with other entities, as appropriate, to stimulate the development and validation of new methodologies to identify, quantify, and mitigate methane emissions. Such actions could boost existing partner participation, and encourage new companies to take on Methane Challenge commitments. For example, the U.S. Department of Energy, in collaboration with the National Energy Technology Laboratory, could undertake work to support new applications for methane mitigation and monitoring technology, including in the context of pilot projects.

### **Methane Challenge Partner Benefits**

The Methane Challenge Program would provide companies with the opportunity to transparently showcase systematic and comprehensive actions to reduce methane emissions and be publicly recognized as leaders in reducing methane emissions in the U.S. At the company level, doing so reduces operational risk, increases efficiency, and demonstrates company concern for the environment, with benefits spanning from climate change to air quality improvements to conservation of a non-renewable energy resource.



### Next Steps

This proposal is intended to outline EPA’s concept for the framework of the proposed Methane Challenge Program. EPA encourages all stakeholders to closely review and provide feedback on any and all elements of the proposed Program. EPA will carefully consider and evaluate all feedback received and is requesting comments by September 1, 2015. Interested stakeholders can submit comments through the Program website [www.epa.gov/gasstar/methanechallenge](http://www.epa.gov/gasstar/methanechallenge) or via e-mail to [methanechallenge@tetrattech.com](mailto:methanechallenge@tetrattech.com), or can request meetings by contacting Carey Bylin at 202-343-9669 or [bylin.carey@epa.gov](mailto:bylin.carey@epa.gov). EPA will also be organizing sector-specific webinars in July; webinar details can be found on the Program website.

EPA plans to continue to work through technical and implementation details with input from stakeholders. In particular, EPA will work with companies indicating significant interest in joining the Program, to ensure that implementation details meet both EPA’s and partner companies’ needs. As a result of regulatory developments in process, there may be a phase-in of coverage of certain sources and sectors within the Program.<sup>13</sup>

EPA intends to launch the Methane Challenge Program by the end of 2015, possibly in conjunction with the next Natural Gas STAR Annual Implementation Workshop in November 2015. More details about the launch will be forthcoming.

### Proposed Timeline<sup>14</sup>

Milestone	Anticipated timeframe
<b>Publish proposed Methane Challenge Program</b>	<b>July 2015</b>
<b>Sector-specific webinars</b>	<b>July 2015</b>
<b>Collect stakeholder feedback</b>	<b>Through September 1, 2015</b>
<b>Revise and finalize Methane Challenge Program</b>	<b>October 2015</b>
<b>Outreach, confirmation of charter partners</b>	<b>Ongoing from October 2015</b>
<b>Launch event with commitments from charter partners</b>	<b>By end of 2015</b>
<b>First full year of Program implementation and data collection begins</b>	<b>January 1, 2016</b>
<b>Development of systems for tracking and collecting data</b>	<b>Summer/Fall 2016</b>
<b>First annual progress reports / data collection due</b>	<b>Spring 2017</b>
<b>First Program data published</b>	<b>Fall 2017</b>

<sup>13</sup> Per the January 14, 2015 announcement: “Building on five technical white papers issued last spring, the peer review and public input received on these documents, and the actions that a number of states are already taking, EPA will initiate a rulemaking effort to set standards for methane and VOC emissions from new and modified oil and gas production sources, and natural gas processing and transmission sources.... In developing these standards, EPA will work with... stakeholders to consider a range of common-sense approaches that can reduce emissions from the sources discussed in the agency’s Oil and Gas White Papers, including oil well completions, pneumatic pumps, and leaks from well sites, gathering and boosting stations, and compressor stations. (<https://www.whitehouse.gov/the-press-office/2015/01/14/fact-sheet-administration-takes-steps-forward-climate-action-plan-anno-1>)

<sup>14</sup> Proposed timeline reflects goal to launch Methane Challenge Program by end of 2015.



## Questions for Stakeholders

EPA encourages stakeholders to provide comments on any and all aspects of the proposed Methane Challenge Program. EPA will carefully consider and evaluate all feedback received through July 2015. To the extent appropriate, applicable, and consistent with the aims of the Methane Challenge Program, this feedback will be incorporated into a revised framework document.

Following are specific areas in which EPA encourages stakeholders to provide feedback by September 1, 2015:

1. Please indicate whether your company has specific interest in one of the commitment options presented, including the possibility or likelihood of your company potentially making that commitment.
2. In addition to recognition through the Program, what are the key incentives for companies to participate in this Program? Should EPA offer some partners extra recognition, such as awards?
3. EPA is proposing to launch the Program with charter partners by the end of 2015, but will welcome new partners on an ongoing basis. Please comment on the likelihood of your company committing to join this Program as a charter partner, or at a future date.
4. For the BMP option, how can EPA encourage companies to make commitments for sources for which they have not made significant progress in implementing mitigation options? In other words, how can companies be encouraged to participate beyond the sources for which they have already made significant progress?
5. Please provide comments on the sources and corresponding BMPs that are provided in Appendix 2, including any recommended additions, deletions, or revisions.
6. Please comment on the proposed definitions of the companies or entities that will make BMP commitments, per Appendix 3.
7. Is a 5-year time limit to achieve BMP commitments appropriate? If not, please provide alternate proposals. Would a shorter time limit encourage greater reductions earlier?
8. Should EPA offer the ER commitment option? If so, please provide specific recommendations for ways that EPA could address the implementation challenges outlined in this document. What is the minimum target company-specific reduction level that should be set for participation in this option? Would your company use this option if it were offered?
9. To what extent is differentiating the voluntary actions from regulatory actions important to stakeholders? What are the potential mechanisms through which the Program could distinguish actions driven by state or federal regulation from those undertaken voluntarily or that go beyond regulatory requirements?
10. EPA plans to leverage existing reported data through the GHGRP (Subpart W) in addition to supplemental data that partners would submit to EPA. Would the e-GGRT system be an appropriate mechanism to collect the voluntary supplemental data?
11. Would companies be willing and able to make commitments related to emission sources where EPA has proposed, but not yet finalized, new GHGRP Subpart W requirements?
12. EPA seeks feedback on potential mechanisms for encouraging continued, active participation in the Program once a company's initial goals have been achieved.
13. EPA is proposing to call this new voluntary effort the "Natural Gas STAR Methane Challenge Program", and welcomes comments and suggestions on this name.



**Appendix 1: Proposed Sources for BMP Commitment Option**

The following table lists recommended methane emission sources that EPA is considering for inclusion in the BMP commitment option at the time of program launch.<sup>15</sup> EPA welcomes comment on this list of focal sources.

Sectors	Sources
Onshore Production and Gathering and Boosting	Pneumatic Controllers
	Equipment Leaks/Fugitive Emissions
	Liquids Unloading
	Pneumatic pumps (only Chemical Injection Pumps (CIP))
	Tanks
Natural Gas (NG) Processing	Reciprocating Compressors-venting
	Centrifugal Compressors-venting
NG Transmission & Underground Storage	Reciprocating Compressors-venting
	Centrifugal Compressors-venting
	Equipment Leaks/Fugitive Emissions
	Pipeline Venting & Blowdowns
	Pneumatic Controllers
NG Distribution	M&R Stations/City Gates
	Mains – Cast Iron, Not Cathodically Protected Steel (Bare and Coated)
	Services
	Blowdowns
	Excavation Damages

<sup>15</sup> EPA may add new sources to this list in the future.

## Appendix 2: Proposed BMPs for BMP Commitment Option

The following table provides high-level information on recommended sources and corresponding BMPs that EPA is considering for inclusion in the BMP commitment option. EPA plans to continue to work through technical and implementation details with input from stakeholders and will include more specific BMP guidance in the final program proposal. The table also includes specific proposed exclusions to the company-wide implementation of best practices.<sup>16</sup>

Sectors	Sources	BMPs
Onshore Production and Gathering and Boosting	Pneumatic Controllers	For gas-driven pneumatic controllers, use low- (defined as gas bleed rate < 6 standard cubic feet/hour) or no-bleed controllers for all applications except those requiring high-bleed controllers for certain purposes, including operational requirements and safety.
	Equipment Leaks/ Fugitive Emissions	Undertake monitoring and repair activities, at specified minimum intervals, following defined parameters governing repair activities.
	Liquids Unloading	Reduce methane emissions from liquids unloading actions during which gas is vented.
	Pneumatic pumps (only CIP)	Implement no- or low-emitting pumps, such as solar or electric pumps, or route bleed gas to flare or gas capture/use.
	Hydrocarbon Storage Tanks	Route gas to capture/use (e.g., VRU) or route gas to flare.
Natural Gas (NG) Processing	Reciprocating Compressors-venting	Route rod packing vent to capture/use or route gas to flare or replace rod packing every 26,000 hours of operation or every 36 months.
	Centrifugal Compressors-venting	Route wet seal de-gassing vent to capture/use or route wet seal de-gassing to flare.

<sup>16</sup> This is additive to the proposal on page 6 that partners could request an exemption to full implementation for each source commitment. Such exemptions could be considered on the condition that the exempted sources (basically, those for which a mitigation option is not implemented) would not represent a significant portion of methane emissions from that source, and would be transparently documented in annual results to provide context for company achievements. EPA is requesting feedback on how to structure the potential exemption option.





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Sectors	Sources	BMPs															
NG Transmission & Underground Storage <sup>17</sup>	Reciprocating Compressors-venting	Same as above.															
	Centrifugal Compressors-venting	Same as above.															
	Compressor Station Equipment Leaks/ Fugitive Emissions	Undertake monitoring and repair activities, at specified minimum intervals, following defined parameters governing repair activities.															
	Pipeline Venting & Blowdowns	Maximize gas recovery and/or emission reductions through the use of a combination of in-line compression (when available) to maximum engineering potential, and route remaining gas to portable compression or flare. Excludes emergency blowdown situations.															
	Pneumatic Controllers	Same as above.															
NG Distribution	M&R Stations/City Gates	Undertake monitoring and repair activities, at specified minimum intervals, following defined parameters governing repair activities.															
	Mains – Cast Iron, Unprotected Steel	<p>Replace/line/seal cast iron pipes or replace/cathodically protect unprotected steel pipes at a specified annual rate. EPA is evaluating the detailed specifications of this BMP and is requesting feedback on approach in general as well as the following proposal for rate of replacement received through Gas STAR Gold Feedback:</p> <table border="1"> <thead> <tr> <th>Tier</th> <th>Inventory of Cast Iron and Unprotected Steel Mains</th> <th>% Annual Replacement</th> </tr> </thead> <tbody> <tr> <td>Tier 1</td> <td>&lt;500 miles</td> <td>6.50%</td> </tr> <tr> <td>Tier 2</td> <td>500 - 1,000 miles</td> <td>5%</td> </tr> <tr> <td>Tier 3</td> <td>1,001 - 1,500 miles</td> <td>3%</td> </tr> <tr> <td>Tier 4</td> <td>&gt; or = 1,500 miles</td> <td>2%</td> </tr> </tbody> </table>	Tier	Inventory of Cast Iron and Unprotected Steel Mains	% Annual Replacement	Tier 1	<500 miles	6.50%	Tier 2	500 - 1,000 miles	5%	Tier 3	1,001 - 1,500 miles	3%	Tier 4	> or = 1,500 miles	2%
	Tier	Inventory of Cast Iron and Unprotected Steel Mains	% Annual Replacement														
	Tier 1	<500 miles	6.50%														
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	Tier 3	1,001 - 1,500 miles	3%														
Tier 4	> or = 1,500 miles	2%															
Services	Evaluation of BMPs in progress.																
High-Pressure Pipe Blowdowns	Maximize gas recovery and/or emission reductions through the use gas to capture/use, flaring, hot tapping, and/or squeezing.																
Excavation Damages	Reduce damages at target rate per thousand locate calls and shorten average time to shut-in for all damages by a minimum percentage.																

<sup>17</sup> EPA has received, and is considering, a proposal to structure BMP coverage of natural gas transmission and storage compressor stations as a Directed Inspection and Maintenance Program.



### Appendix 3: Proposed Organization Structure for BMP Commitments

This appendix offers proposed levels at which companies would make commitments under the Methane Challenge BMP commitment option.<sup>18</sup> To the extent that companies operate in more than one sector, they have the option to make BMP commitments in one or more sector. In considering this proposal, companies should note that they may have multiple facilities reporting to GHGRP Subpart W. Companies should also consider relevant regulations that cover their operations and the ability to demonstrate voluntary action within a given organizational structure.

EPA encourages stakeholders to provide feedback on these proposals.

Onshore Production: Division or Business Unit Level, defined as a separately managed division or unit of an enterprise with strategic and/or operational objectives that may be distinct from the parent unit and other divisions or business units. A division or business unit typically targets a specific market or business or operational concern, which requires a production or management specialty and approach.

Natural Gas (NG) Processing: Division or Business Unit Level, defined as a separately managed division or unit of an enterprise with strategic and/or operational objectives that may be distinct from the parent unit and other divisions or business units. A division or business unit targets a specific market or business or operational concern, which requires a production or management specialty and approach.

NG Transmission Compression and Underground Storage: a natural gas transmission company operating an inter- or intra-state transmission pipeline system as regulated/defined by FERC or an individual state.

NG Distribution: a local distribution company as regulated by a single state public utility commission.

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<sup>18</sup> One Future has its own parameters for partner participation.