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MEMORANDUM

TO: Erika Bierschbach, Vice President Energy and Market Operations

FROM: Matthew Russell, Director (Interim) Environmental Health and Safety Services

DATE: September 9, 2019

SUBJECT: Methane emissions from gas production

The Austin Energy Resource, Generation and Climate Protection Plan to 2027 dated October 2, 2017 and developed pursuant to Austin City Council Resolution No. 20170817-061 committed Austin Energy to the following actions related to impacts of conventional generation:

- **Austin Energy should study methane emissions associated with gas production and delivery and best practices to prevent methane and hydrocarbon leaks in the gas fields.**
- **Austin Energy and the City Council should support further regulations in gas fields to prevent leaks and vents of methane because of its severe impacts on climate disruption.**

This memorandum summarizes Austin Energy's activities related to these two commitments.

Beginning in 2016 Austin Energy joined a group of other electric and natural gas utilities titled the Natural Gas Supply Collaborative (NGSC). The NGSC is a voluntary collaborative of large natural gas purchasers interested in promoting safe and responsible practices for natural gas supply. Current membership, research summaries, and other resources can be found at this internet site:

<https://www.mjbradley.com/content/natural-gas-supply-collaborative-0>

The NGSC funded research and outreach conducted by a third party consulting firm to:

- Promote safe and responsible practices for the supply of natural gas.
- Respond to heightened interest in environmental and social impacts of natural gas production.

- Extend existing supplier sustainability efforts to include natural gas, a primary business input for NGSC participants.
- Encourage advances in the availability and accessibility of information associated with natural gas production practices.

Work products completed for the collaborative are posted online and available to the public, and Austin Energy and other members benefitted from extensive background research and reference information provided to us on methane leaks, air emissions, water use, chemical use, as well as community impacts and workforce safety.

Highlights and outcomes from participation in the NGSC include:

- Understanding of the gas production system, characteristics of methane leaks, and relative importance of upstream processes in evaluating the life-cycle climate impacts of burning natural gas to produce electricity. Nationally, upstream methane leaks/venting in the gas supply chain can increase the life-cycle climate impacts of burning gas because of methane's higher global-warming potential. However, at expected methane leak rates, burning natural gas to create electricity is expected to have less of a life-cycle climate impact compared to burning coal in a traditional boiler. Upstream methane losses can differ considerably from production basin to production basin, and even well to well, and emissions can be dominated by super-emitter wells. In recent years more gas producers have begun to publish upstream methane loss estimates. Austin Energy buys its gas from multiple sellers and receives it via the gas transmission infrastructure that sources gas from wells throughout the region; we do not have a way to trace those purchases to individual gas wells and therefore there is currently no way to calculate an upstream methane loss associated with the natural gas used at our gas-fired units. Austin Energy is advocating for more gas producers to publish this information to facilitate this type of analysis in the future.
- Publication of a report in October 2017 identifying a set of non-financial performance indicators related to natural gas production that respond to stakeholder questions about that activity. The collaborative is promoting awareness about these concerns and calling for use of these indicators throughout the natural gas industry to promote more transparency into this important link in the electric and natural gas utility supply chain. The 2017 report can be found [here](#). An accompanying technical document found [here](#) provides more detail and resources with historical natural gas production information.
- Direct engagement by NGSC members with representatives from the natural gas production and supply industry to promote the need for better transparency into impacts of gas production and to relay our customer concerns about the impacts of this product.

- Publication of a [report](#) in January 2019 highlighting steps taken across the natural gas supply chain in 2018 to improve performance. These include announcements by several natural gas producers establishing methane emissions targets. The report also introduces two new resources that the collaborative released to the public to enhance understanding of the impacts of natural gas production and what actions companies are taking to address those:
 - An [inventory](#) of sustainability reports and voluntary disclosure documents from the top 40 gas producers in 2018.
 - Interactive [charts](#) of natural gas production data by state and shale play showing where natural gas is being produced in the United States.

Austin Energy closely follows all regulatory activity related to environmental impacts of natural gas production at both the state and federal level. Austin Energy continues to advocate for a legislative solution to limiting greenhouse gas emissions economy-wide, including from gas and oil production. Austin Energy also supports regulation of gas producers as mandated in the Clean Air Act, including the appropriate application of performance standards for new and existing gas wells. On September 3rd, Austin Energy was a signatory to [a joint statement](#) disagreeing with EPA's proposal to roll back existing methane limits on oil and gas wells.