

## **IV. Environmental Impact Analysis**

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### **L.1 Utilities and Service Systems—Energy Infrastructure**

#### **1. Introduction**

This section of the Draft EIR analyzes the Project's potential impacts on electricity and natural gas infrastructure. The information presented herein is based, in part, on the *Energy Calculations for citizenM Project* provided in Appendix D.1 of this Draft EIR and the *Utility Infrastructure Technical Report: Energy* (Energy Report) prepared by KPFF Consulting Engineers (May 2018), included as Appendix D.2 of this Draft EIR.

#### **2. Environmental Setting**

##### **a. Regulatory Framework**

###### **(1) Federal**

The United States Department of Energy (DOE) is the federal agency responsible for establishing policies regarding energy conservation, domestic energy production and infrastructure. The Federal Energy Regulatory Commission (FERC) is an independent federal agency, officially organized as part of the DOE which is responsible for regulating interstate transmission of natural gas, oil and electricity, reliability of the electric grid and approving of construction of interstate natural gas pipelines and storage facilities. The Energy Policy Act of 2005 has also granted FERC with additional responsibilities of overseeing the reliability of the nation's electricity transmission grid and supplementing state transmission siting efforts in national interest electric transmission corridors.

FERC has authority to oversee mandatory reliability standards governing the nation's electricity grid. FERC has established rules on certification of an Electric Reliability Organization (ERO) which establishes, approves and enforces mandatory electricity reliability standards. The North American Electric Reliability Corporation (NERC) has been certified as the nation's ERO by FERC to enforce reliability standards in all interconnected jurisdictions in North America.

Although FERC regulates the bulk energy transmission and reliability throughout the United States, the areas outside of FERC's jurisdictional responsibility include state level

regulations and retail electricity and natural gas sales to consumers which falls under the jurisdiction of state regulatory agencies.

## (2) State

California energy infrastructure policy is governed by three institutions: the California Independent System Operator (California ISO), the California Public Utilities Commission (CPUC), and the California Energy Commission (CEC). These three agencies share similar goals, but have different roles and responsibilities in managing the State's energy needs.

The majority of state regulations with respect to electricity and natural gas pertain to energy conservation. For a discussion of these regulations, refer to Section IV.D, Energy, of this Draft EIR. There are, however, regulations pertaining to infrastructure. These are discussed further below.

### *(a) California Independent System Operator*

The California ISO is an independent public benefit corporation responsible for operating California's long-distance electric transmission lines. The California ISO is led by a five-member board appointment by the Governor and is also regulated by FERC. While transmission owners and private electric utilities own their lines, the California ISO operates the transmission system independently to ensure that electricity flows comply with federal operational standards. The California ISO analyzes current and future electrical demand and plans for any needed expansion or upgrade of the electric transmission system.

### *(a) California Public Utilities Commission*

The CPUC establishes policies and rules for electricity and natural gas rates provided by private utilities in California such as Southern California Edison (SCE), Southern California Gas Company (SoCalGas), and San Diego Gas and Electric (SDG&E). Public owned utilities such as the Los Angeles Department of Water and Power (LADWP) do not fall under the CPUCs jurisdiction.

The CPUC is overseen by five commissioners appointed by the Governor and confirmed by the state Senate. The CPUC's responsibilities include regulating electric power procurement and generation, infrastructure oversight for electric transmission lines and natural gas pipelines and permitting of electrical transmission and substation facilities.

*(a) California Energy Commission*

The CEC is a planning agency which provides guidance on setting the state's energy policy. Responsibilities include forecasting electricity and natural gas demand, promoting and setting energy efficiency standards throughout the state, developing renewable energy resources and permitting thermal power plants 50 megawatts and larger. The CEC also has regulatory specific regulatory authority over publicly owned utilities to certify, monitor and verify eligible renewable energy resources procured.

*(b) Senate Bill 1389*

Senate Bill (SB) 1389 (Public Resources Code Sections 25300–25323), adopted in 2002, requires the development of an integrated plan for electricity, natural gas, and transportation fuels. Under the bill, the CEC must adopt and transmit to the Governor and Legislature an Integrated Energy Policy Report every two years. In 2018, the CEC decided to write the Integrated Energy Policy Report in two volumes. The Volume I, which was published on August 1, 2018, highlights the implementation of California's innovative policies and the role they have played in moving toward a clean energy economy. Volume II, which was adopted in February 2019, identifies several key energy issues and actions to address these issues and ensure the reliability of energy resources.<sup>1</sup>

**(3) Regional**

There are no regional regulations with respect to electricity and natural gas infrastructure. For a discussion of regional regulations pertaining to energy conservation, refer to Section IV.D, Energy, of this Draft EIR.

**(4) Local**

There are no local regulations with respect to electricity and natural gas infrastructure. For a discussion of local regulations pertaining to energy conservation, refer to Section IV.D, Energy, of this Draft EIR.

**b. Existing Conditions**

**(1) Electricity**

LADWP provides electrical service throughout the City of Los Angeles and many areas of the Owens Valley, serving approximately 4 million people within a service area of

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<sup>1</sup> 2018 Integrated Energy Policy Report Update, Volume II, February 2019.

approximately 465 square miles, excluding the Owens Valley. Electrical service provided by the LADWP is divided into two planning districts: Valley and Metropolitan. The Valley Planning District includes the LADWP service area north of Mulholland Drive, and the Metropolitan Planning District includes the LADWP service area south of Mulholland Drive. The Project Site is located within LADWP's Metropolitan Planning District.

LADWP generates power from a variety of energy sources, including hydropower, coal, gas, nuclear sources, and renewable resources, such as wind, solar, and geothermal sources. According to LADWP's 2017 Power Strategic Long-Term Resources Plan, the LADWP has a net dependable generation capacity greater than 7,531 MW.<sup>2</sup> In 2017, the LADWP power system experienced an instantaneous peak demand of 6,432 MW.<sup>3</sup> Approximately 30 percent of LADWP's 2017 electricity purchases were from renewable sources, which is similar to the 29 percent statewide percentage of electricity purchases from renewable sources.<sup>4</sup>

LADWP supplies electrical power to the Project Site from electrical service lines located in the Project vicinity. According to the Energy Report, the Project Site receives electric power service via an existing underground conduit in Vine Street. It is estimated that the existing 6,393 square feet of commercial uses on the Project Site currently consume approximately 331,520 kWh of electricity per year.<sup>5</sup>

## (2) Natural Gas

Natural gas is provided to the Project Site by SoCalGas. SoCalGas is the principal distributor of natural gas in Southern California, serving residential, commercial, and industrial markets. SoCalGas serves approximately 21.8 million customers in more than 500 communities encompassing approximately 24,000 square miles throughout Central and Southern California, from the City of Visalia to the Mexican border.<sup>6</sup>

SoCalGas receives gas supplies from several sedimentary basins in the western United States and Canada, including supply basins located in New Mexico (San Juan Basin), West Texas (Permian Basin), the Rocky Mountains, and Western Canada as well

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<sup>2</sup> LADWP, *2017 Power Strategic Long-Term Resources Plan*, December 2017.

<sup>3</sup> LADWP, *2017 Retail Electric Sales and Demand Forecast*, p. 6.

<sup>4</sup> California Energy Commission, *Utility Annual Power Content Labels for 2017*, [www.energy.ca.gov/pcl/labels/2017\\_index.html](http://www.energy.ca.gov/pcl/labels/2017_index.html), accessed March 8, 2019.

<sup>5</sup> *Eyestone Environmental, Energy Calculations for citizenM Project*, See Appendix D of this Draft EIR.

<sup>6</sup> SoCalGas, *Company Profile*, <https://www.socalgas.com/about-us/company-profile>, accessed March 8, 2019.

as local California supplies.<sup>7</sup> The traditional, southwestern United States sources of natural gas will continue to supply most of SoCalGas' natural gas demand. The Rocky Mountain supply is available but is used as an alternative supplementary supply source, and the use of Canadian sources provide only a small share of SoCalGas supplies due to the high cost of transport.<sup>8</sup> Gas supply available to SoCalGas from California sources averaged 323 million cf per day in 2017 (the most recent year for which data are available).<sup>9</sup>

SoCalGas supplies natural gas to the Project Site from natural gas service lines located in the Project vicinity. According to the Energy Report, it appears that the Project Site receives natural gas service via a SoCalGas operated six-inch service on the east side of Vine Street. It is estimated that existing uses on the Project Site currently consume approximately 1,426,190 cf of natural gas per year.<sup>10</sup>

### 3. Project Impacts

This analysis addresses the Project's potential impacts on electricity and natural gas infrastructure. The Project's estimated energy consumption was calculated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2.

#### a. Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the Project would have a significant impact related to electricity and natural gas infrastructure if it would:

***Threshold (a): Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?***<sup>11</sup>

For this analysis, the Appendix G Threshold listed above is relied upon. The analysis utilizes factors and considerations identified in the City's 2006 L.A. CEQA

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<sup>7</sup> California Gas and Electric Utilities, 2018 California Gas Report, p. 80.

<sup>8</sup> California Gas and Electric Utilities, 2018 California Gas Report, p. 80.

<sup>9</sup> California Gas and Electric Utilities, 2018 California Gas Report, p. 80.

<sup>10</sup> Eyestone Environmental, Energy Calculations for citizenM Project, See Appendix D of this Draft EIR.

<sup>11</sup> Refer to the Project's Initial Study included as Appendix A of this Draft EIR for a discussion of wastewater and stormwater impacts; Section IV.L.2, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR for a discussion of water supply and infrastructure; and Section VI, Other CEQA Considerations, for a discussion of telecommunications facility impacts.

Thresholds Guide, as appropriate, to assist in answering the Appendix G Threshold question.

The L.A. CEQA Thresholds Guide identifies the following criteria to evaluate impacts to energy infrastructure:

- Would the project result in the need for new (off-site) energy supply facilities, or major capacity enhancing alterations to existing facilities?

## **b. Methodology**

This analysis evaluates the potential impacts of the Project on existing energy infrastructure by comparing the estimated Project energy demand with the available capacity. Will-serve letters from LADWP and SoCalGas included in Appendix D of this Draft EIR demonstrate the availability of sufficient energy resources to supply the Project's demand.

Project energy usage, including electricity and natural gas was calculated using CalEEMod Version 2016.3.2. During construction, energy would be consumed in the form of electricity associated with conveyance of water, lighting and other construction activities necessitating electrical power. Construction activities typically do not involve the consumption of natural gas. Operational energy consumption would include electricity and natural gas from uses such as heating/ventilation/air conditioning (HVAC); water heating, cooking, lighting, and use of electronics/appliances. Additional details regarding Project energy usage are provided in Section IV.D, Energy, and Appendix D of this Draft EIR.

The Project's estimated energy demands were analyzed relative to LADWP's and SoCalGas' existing and planned energy supplies in 2022 (i.e., the Project buildout year) to determine if these two energy utility companies would be able to meet the Project's energy demands. Finally, the capacity of local infrastructure to accommodate the Project's estimated electricity and natural gas demand was assessed based on the Energy Report, included as Appendix D.2 of this Draft EIR.

## **c. Project Design Features**

No specific project design features are proposed with regard to energy infrastructure. However, the Project would include project design features designed to improve energy efficiency as set forth in Section IV.E, Greenhouse Gas Emissions, of this Draft EIR. The Project would also implement Project Design Feature NOI-PDF-1 in Section IV.G, Noise, of this Draft EIR, which would include the use of solar-powered generators, to the extent feasible, which would promote energy conservation and reduce the burden on existing infrastructure.

## d. Analysis of Project Impacts

***Threshold (a): Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*<sup>12</sup>**

(a) *Construction*

(i) *Electricity*

As discussed above, construction activities at the Project Site would require minor quantities of electricity for lighting, power tools and other support equipment. Heavy construction equipment would be powered with diesel fuel.

During Project construction activities, electricity usage represents 1 percent<sup>13</sup> of the estimated net annual Project operational demand, which as described below, LADWP's existing electrical infrastructure currently has enough capacity to provide service for the Project. Moreover, construction electricity usage would replace the existing electricity usage at the Project Site during construction since the existing on-site uses which currently generate a demand for electricity would be removed. As existing power lines are located in the vicinity of the Project Site, temporary power poles may be installed to provide electricity during Project construction. Existing off-site infrastructure would not have to be expanded or newly developed to provide electrical service to the project during construction or demolition. **Therefore, the Project would not result in an increase in demand for electricity that exceeds available supply or distribution infrastructure capabilities that could result in the relocation or construction of new or expanded electric power facilities, the construction or relocation of which could cause significant environmental effects.**

With regard to existing electrical distribution lines, the Project would be required to coordinate electrical infrastructure removals or relocations with LADWP and comply with site-specific requirements set forth by LADWP, which would ensure that service disruptions and potential impacts associated with grading, construction, and development within

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<sup>12</sup> Refer to the Project's Initial Study included as Appendix A of this Draft EIR for a discussion of wastewater and stormwater impacts; Section IV.L.2, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR for a discussion of water supply and infrastructure; and Section VI, Other CEQA Considerations, for a discussion of telecommunications facility impacts.

<sup>13</sup> The percentage is derived by taking the total amount of electricity usage during construction (23,261 kWh) and dividing that number by the total amount of net electricity usage during operation (2,430,102 kWh) to arrive at 1 percent.

LADWP easements are minimized. **As such, construction of the Project is not anticipated to adversely affect the electrical infrastructure serving the surrounding uses or utility system capacity.**

*(ii) Natural Gas*

Construction activities, including the construction of new buildings and facilities, typically do not involve the consumption of natural gas. Accordingly, natural gas would not be supplied to support Project construction activities; thus there would be no demand generated by construction. However, the Project would involve installation of new natural gas connections to serve the Project Site. Since the Project Site is located in an area already served by existing natural gas infrastructure, it is anticipated that the Project would not require extensive off-site infrastructure improvements to serve the Project Site. Construction impacts associated with the installation of natural gas connections are expected to be confined to trenching in order to place the lines below surface. In addition, prior to ground disturbance, Project contractors would notify and coordinate with SoCalGas to identify the locations and depth of all existing gas lines and avoid disruption of gas service to other properties. **Therefore, construction of the Project would not result in an increase in demand for natural gas to affect available supply or distribution infrastructure capabilities and would not result in the relocation or construction of new or expanded natural gas facilities, the construction or relocation of which could cause significant environmental effects.**

*(b) Operation*

*(i) Electricity*

As shown in Table IV.D.2 in Section IV.D, Energy, of this Draft EIR, the Project's operational electricity usage would be 2,430 MWh per year, which is approximately 0.01 percent of LADWP's projected sales in 2022.<sup>14</sup> In addition, during peak conditions, the Project would represent approximately 0.01 percent of the LADWP estimated peak load. LADWP has confirmed that the Project's electricity demand can be served by the facilities in the Project area.<sup>15</sup> **Therefore, during Project operations, it is anticipated that LADWP's existing and planned electricity capacity and electricity supplies would be sufficient to support the Project's electricity demand.**

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<sup>14</sup> LADWP, 2017 Power Strategic Long-Term Resources Plan, December 2017, Appendix A, Table A-1.

<sup>15</sup> KPFF Consulting Engineers, Utility Technical Report: Energy, March 15, 2017. Refer to Appendix D.2 of this Draft EIR.



*(ii) Natural Gas*

As shown in Table IV.D.2 in Section IV.D, Energy, of this Draft EIR, the Project would consume 7,030,152 cf of natural gas per year, which represents approximately 0.001 percent of the 2022 forecasted consumption in the SoCalGas planning area. SoCalGas has confirmed that the Project's natural gas demand can be served by the facilities in the Project area.<sup>16</sup> **Therefore, it is anticipated that SoCalGas' existing and planned natural gas supplies would be sufficient to support the Project's net increase in demand for natural gas.**

*(c) Conclusion*

**As demonstrated in the analysis above, construction and operation of the Project would not result in an increase in demand for electricity or natural gas that exceeds available supply or distribution infrastructure capabilities that could result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects would be less than significant during construction and operation.**

## 4. Cumulative Impacts

### a. Electricity

Buildout of the Project, related projects, and additional forecasted growth in LADWP's service area would cumulatively increase the demand for electricity supplies and infrastructure capacity. LADWP forecasts that its total energy sales in the 2022-2023 fiscal year (the Project buildout year) will be 22,802 GWh of electricity.<sup>17,18</sup> Based on the Project's estimated net new electrical consumption of 2,430 MWh per year, the Project would account for approximately 0.01 percent of LADWP's projected sales for the Project's buildout year and in general, each related project would be expected to comprise a similarly limited percentage of overall electricity consumption. In addition, LADWP has confirmed that the Project's electricity demand can be served by the facilities in the Project area.<sup>19</sup> Therefore, electricity usage resulting from future operations at many of the related projects is likely accounted for in the LADWP projections.

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<sup>16</sup> *KPFF Consulting Engineers, Utility Technical Report: Energy, March 15, 2017. Refer to Appendix D.2 of this Draft EIR.*

<sup>17</sup> *LADWP defines its future electricity supplies in terms of sales that will be realized at the meter.*

<sup>18</sup> *LADWP, 2017 Power Strategic Long-Term Resources Plan, December 2017, Appendix A, Table A-1.*

<sup>19</sup> *KPFF Consulting Engineers, Utility Technical Report: Energy, March 15, 2017. Refer to Appendix D.2 of this Draft EIR.*

Electricity infrastructure is typically expanded in response to increasing demand, and system expansion and improvements by LADWP are ongoing. LADWP would continue to expand delivery capacity as needed to meet demand increases within its service area at the lowest cost and risk, consistent with LADWP's environmental priorities and reliability standards. The 2017 Power Strategic Long-Term Resources Plan takes into account future energy demand, advances in renewable energy resources and technology, energy efficiency, conservation, and forecast changes in regulatory requirements. Development projects within the LADWP service area would also be anticipated to incorporate site-specific infrastructure improvements, as necessary. Although detailed information regarding electrical infrastructure for each of the related projects is not known, it is expected that LADWP would provide for necessary improvements specific to each related project. Each of the related projects would be reviewed by LADWP to identify necessary power facilities and service connections to meet the needs of their respective projects. Project applicants would be required to provide for the needs of their individual projects, thereby contributing to the electrical infrastructure in the Project area. As discussed above, will serve letters are provided for individual projects which determines whether sufficient infrastructure is in place to provide electrical service to the proposed project. As part of the will serve letter process, LADWP takes into account all uses (including related projects) in the service area ensure that sufficient local and regional infrastructure is adequate. As the will serve letter for the Project identified adequate infrastructure, construction and operation of the Project would not adversely affect the LADWP electrical grid. **As such, the Project's contribution to cumulative impacts with respect to electric power facilities would not be cumulatively considerable and, thus, would be less than significant.**

## b. Natural Gas

Buildout of the Project, related projects, and additional forecasted growth in SoCalGas' service area would cumulatively increase the demand for natural gas supplies and infrastructure capacity. Based on the 2018 California Gas Report, the CEC estimates natural gas consumption within SoCalGas' planning area will be approximately 2,503 million cf per day in 2022, the Project's buildout year.<sup>20</sup> The Project would account for approximately 0.001 percent of the 2022 forecasted consumption in SoCalGas's planning area. In addition, SoCalGas has confirmed that the Project's natural gas demand can be served by the facilities in the Project area, and in general, each related project would be expected to comprise a similarly limited percentage of overall natural gas consumption.<sup>21</sup> Moreover, SoCalGas' forecasts take into account projected population growth and development based on local and regional plans. Therefore, natural gas usage resulting

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<sup>20</sup> *California Gas and Electric Utilities, 2018 California Gas Report.*

<sup>21</sup> *KPFF Consulting Engineers, Utility Technical Report: Energy, March 15, 2017. Refer to Appendix D.2 of this Draft EIR.*

from future operations at many of the related projects is likely accounted for in the SoCalGas projections.

Natural gas infrastructure is typically expanded in response to increasing demand and system expansion and improvements by SoCalGas occur as needed. It is expected that SoCalGas would continue to expand delivery capacity if necessary to meet demand increases within its service area. Although detailed information regarding natural gas infrastructure for each of the related projects is not known, it is expected that SoCalGas would provide for necessary improvements specific to each related project. Development projects within its service area would also be anticipated to incorporate site-specific infrastructure improvements, as appropriate. Project applicants would be required to provide for the needs of their individual projects, thereby contributing to the natural gas infrastructure in the Project area.

As discussed above, will serve letters are provided for individual projects which determines whether sufficient infrastructure is in place to provide natural gas service to the proposed project. As part of the will serve letter process, SoCalGas takes into account all uses (including related projects) in the service area ensure that sufficient local and regional infrastructure is adequate. As the will serve letter for the Project identified adequate infrastructure, construction and operation of the Project would not significantly affect the SoCalGas regional infrastructure. **As such, the Project's contribution to cumulative impacts with respect to natural gas facilities would not be cumulatively considerable and, thus, would be less than significant.**

### **c. Conclusion**

**Based on the analysis provided above, the Project's contribution to cumulative impacts related to energy consumption (i.e., electricity, natural gas) would not result in a cumulatively considerable effect related to available supply or distribution infrastructure capabilities that could result in the relocation or construction of new or expanded electric power and natural gas facilities, the construction of which could cause significant environmental effects. As such, the Project's impacts would not be cumulatively considerable; therefore, cumulative energy infrastructure impacts under Threshold (a) are concluded to be less than significant.**

## **5. Mitigation Measures**

Project-level and cumulative impacts with regard to energy infrastructure would be less than significant. Therefore, no mitigation measures are required.

## **6. Level of Significance After Mitigation**

Project-level and cumulative impacts related to energy infrastructure would be less than significant without mitigation.