# E.4.11 Air Quality

The Modified Route D Alternative route is described in Section E.4.1. It includes three main segments: a southwesterly segment that crosses BLM, CNF and private lands before reaching the Cameron Substation, a westerly segment that follows the southern boundary of the CNF, and a northerly segment that is primarily on CNF land and includes the Modified Route D Alternative Substation.

## E.4.11.1 Environmental Setting

The air quality setting for the Modified Route D Alternative is similar to that of the Central Link. The air quality in this forested mountainous area is described in Section D.11.2.3. The Modified Route D Alternative and the Modified Route D Substation Alternative are within San Diego County, administered by the SDAPCD.

## E.4.11.2 Environmental Impacts and Mitigation Measures

This section presents a discussion of impacts and mitigation measures for the Modified Route D Alternative as a result of construction, operation, and maintenance of the alternative. Table E.4.11-1 summarizes the impacts of the Modified Route D Alternative on air quality.

Table E.4.11-1. Impacts Identified – Modified Route D Alternative – Air Quality

| Impact No. | Description | Impact Significance |
|---|---|---|
| Modified Route D Alternative and Star Valley Option | | |
| AQ-1 | Construction would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants | Class I |
| AQ-2 | Operation, maintenance, and inspections would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants | Class III |
| AQ-3 | Power generated during transmission line operation would cause emissions from power plants. | Class III |
| AQ-4 | Project activities would cause a net increase of greenhouse gas emissions | Class I |
| Modified Route D Substation | | |
| AQ-1 | Construction would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants | Class I |
| AQ-2 | Operation, maintenance, and inspections would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants | Class III |

Overall air quality impacts of the Modified Route D Alternative would be similar to those of the Proposed Project described in Section D.11.13. Construction impacts vary because of the route, but impacts related to power generated during transmission line operation (Impact AQ-3) and the overall net increase of greenhouse gas emissions (Impact AQ-4) would be identical for this alternative transmission line route. This means that mitigation measures identified for overall air quality impacts in Section D.11.13 [Mitigation Measures AQ-1h (obtain NOx and particulate matter offsets), AQ-4a (offset construction-phase greenhouse gas emissions), AQ-4b (offset operation-phase greenhouse gas emissions), and AQ-4c (avoid sulfur hexafluoride emissions)] would remain applicable to the Modified Route D Alternative as with the overall Proposed Project.

## Construction Impacts

### *Impact AQ-1: Construction would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants (Class I)*

The Modified Route D Alternative would generate dust and exhaust emissions from concurrent construction activity with multiple crews operating off-road equipment and on-road mobile sources at separate locations. General construction, structure foundation excavation, structure delivery and setup, wire installation, and fugitive dust from travel along the ROW could each occur simultaneously on any given day of construction. Table E.4.11-2 shows the estimated emissions for construction of the Modified Route D Alternative.

Table E.4.11-2. Emissions from Construction of Modified Route D Alternative Transmission Line

| Construction Activity | NOx (lb/day) | VOC (lb/day) | PM10 (lb/day) | PM2.5 (lb/day) | CO (lb/day) | SOx (lb/day) | $CO_2$ (lb/day) |
|---|---|---|---|---|---|---|---|
| Off-Road Equipment and On-Road Vehicles | 2,023.2 | 272.4 | 106.0 | 106.0 | 939.4 | 43.0 | 199,777.0 |
| Fugitive Dust | --- | --- | 7,601.5 | 886.8 | --- | --- | --- |
| Daily Activity Totals | 2,023.2 | 272.4 | 7,707.5 | 992.8 | 939.4 | 43.0 | 199,777.0 |
| Significance Criteria | 250 | 75 | 100 | 55 | 550 | 250 | 0 |
| Exceed Significance Threshold? | Yes | Yes | Yes | Yes | Yes | No | * |

Source: EIR/EIS Appendix 10.
* For discussion of impact significance of CO2 emissions and greenhouse gases, see Section D.11.13.3.

The air quality impact of building the Modified Route D 500 kV segment for 39 miles under this alternative would cause emissions over the thresholds, and these emissions would occur as part of the overall I-8 Alternative construction activities and the remainder of the Proposed Project. The construction equipment and emissions from motor vehicles used to mobilize the workforce and materials for construction would result in temporary significant ozone, carbon monoxide, and particulate matter impacts. The APMs listed in Table D.11-10 would reduce these impacts, but exhaust and dust emissions would exceed the significance thresholds. Mitigation Measures AQ-1a and AQ-1b would further reduce these impacts, but as described for the I-8 Alternative (Section E.1.11) and remainder of the Proposed Project, the construction-phase emissions would be significant and unavoidable (Class I). (See Appendix 12 for the full text of the mitigation measures.)

### *Mitigation Measures for Impact AQ-1: Construction would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants*

**AQ-1a Suppress dust at all work or staging areas and on public roads.**

**AQ-1b Use low-emission construction equipment.**

## Operational Impacts

### *Impact AQ-2: Operation, maintenance, and inspections would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants (Class III)*

Dust and exhaust emissions generated during activities necessary for the operation, maintenance, and inspection of the Modified Route D Alternative would involve new vehicle trips to patrol the portions alternative corridor that are new and that do not follow existing transmission lines. A minor increase in dust and exhaust emissions from the mobile sources would occur when compared to the existing condi-

tions. Mobile source emissions related to vegetation clearing would also occur, but only occasionally, and the associated emissions would not contribute to a potentially significant impact. The incremental increase of emissions that would be caused by vehicular traffic for inspection and maintenance activities would be less than the thresholds for operation significance in Table D.11-8. Direct emissions from vehicular traffic for maintenance activities would cause an adverse but less than significant impact, and mitigation measures are not required (Class III).

#### *Impact AQ-3: Power generated during transmission line operation would cause emissions from power plants (Class III)*

The Modified Route D Alternative would facilitate transmission of power into San Diego County from power plants that would increase operation outside of San Diego County, and it would reduce the need to generate power in San Diego County. Although some existing fossil fuel-fired power plants could increase operation, this would only occur within previously permitted limits. As in Overall Impacts of Proposed Project (Section D.11.13), the air quality effect of power plant operation would be adverse but less than significant (Class III).

#### *Impact AQ-4: Project activities would cause a net increase of greenhouse gas emissions (Class I)*

The Modified Route D Alternative would cause an overall net increase of GHG emissions identical to that described in Overall Impacts of Proposed Project (Section D.11.13). Mitigation would reduce the GHG impact but not to a less than significant level (Class I).

#### *Mitigation Measure for Impact AQ-4: Project activities would cause a net increase of greenhouse gas emissions*

**AQ-4a Offset construction-phase greenhouse gas emissions with carbon credits.**

**AQ-4b Offset operation-phase greenhouse gas emissions with carbon credits.**

**AQ-4c Avoid sulfur hexafluoride emissions.**

## E.4.11.3 Modified Route D Substation Alternative

### Environmental Setting

The air quality setting for the Modified Route D Substation Alternative is similar to that of the Central Link. The air quality in this forested mountainous area is described in Section D.11.2.3. This alternative substation would be within San Diego County, administered by the SDAPCD.

### Environmental Impacts and Mitigation Measures

### Construction Impact

#### *Impact AQ-1: Construction would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants (Class I)*

Construction activities for the Modified Route D Alternative Substation would involve many of the same types of construction equipment that would be associated with construction of the transmission line, and the resulting air quality impacts would be similar to those for the proposed Central East Substation shown in Table D.11-15, in Section D.11.7. Please see Table D.11-15 for the maximum emissions

expected from all activities related to construction of this alternative substation. Construction of the Modified Route D Substation Alternative would cause emissions over the thresholds by itself, and as part of the overall Interstate 8 Alternative construction activities, the air quality impact would be significant. The APMs listed in Table D.11-10 would reduce this impact, but exhaust emissions would exceed the significance thresholds. Mitigation Measures AQ-1a and AQ-1b would further reduce these impacts, but the construction-phase emissions would be significant and unavoidable (Class I).

***Mitigation Measures for Impact AQ-1: Construction would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants***

**AQ-1a Suppress dust at all work or staging areas and on public roads.**

**AQ-1b Use low-emission construction equipment.**

### Operational Impacts

***Impact AQ-2: Operation, maintenance, and inspections would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants (Class III)***

Operation of the Modified Route D Alternative Substation would cause minor vehicular traffic for maintenance and inspections, and the substation would be remotely operated. Direct emissions from occasional vehicular traffic to the substation would cause an adverse but less than significant impact (Class III).

## E.4.11.4 Star Valley Option

### Environmental Setting

The air quality setting for the Star Valley Option is similar to that of the Central Link. The air quality in this forested mountainous area is described in Section D.11.2.3. The option would be within San Diego County, administered by the SDAPCD.

### Environmental Impacts and Mitigation Measures

Impacts AQ-1 through AQ-4 and all mitigation measures identified for the Modified Route D Alternative (Section E.4.11.1) would apply to the Star Valley Option.

## E.4.11.5 Future Transmission System Expansion

For the Proposed Project and route alternatives along the Proposed Project route, Section B.2.7 identifies Future Transmission System Expansion routes for both 230 kV and 500 kV future transmission lines. These routes are identified, and impacts are analyzed in Section D of this EIR/EIS, because SDG&E has indicated that transmission system expansion is foreseeable, possibly within the next 10 years. For the SWPL alternatives, 500 kV and 230 kV expansions would also be possible. The potential expansion routes for the Route D Alternative are described in the following paragraphs.

### 230 and 500 kV Future Transmission System Expansion

The Modified Route D Alternative would begin at approximately Interstate 8 MP-47 and would head southwest then northward until it reached the Interstate 8 Alternative at approximately MP I8-71. A substation could be built to convert the 500 kV line to 230 kV at approximately MD-34, the Modified Route D Substation Alternative. The double-circuit 230 kV line would exit the substation overhead,

then continue north into the CNF, joining the Interstate 8 Alternative at approximately MP I8-71 where it transitions to underground at the east end of Alpine Boulevard. The Modified Route D Substation would accommodate up to six 230 kV circuits and a 500 kV circuit. Only two 230 kV circuits are proposed at this time, but construction of additional 230 kV circuits and a 500 kV circuit out of the Modified Route D Substation may be required in the future. There are three routes that are most likely for these future lines; each is described below. Figure E.1.1-6 illustrates the potential routes of the future transmission lines.

- Two additional 230 kV circuits could be installed underground within Alpine Boulevard, with appropriate compact duct banks and engineering to avoid, or possibly relocate, existing utilities. This route would follow the Interstate 8 Alternative route from the Interstate 8 Alternative Substation until MP I8-70.8 where it would transition underground until MP I8-79 where it would transition overhead again. The future transmission line route would continue to follow the Interstate 8 Alternative's overhead 230 kV route to the point where it meets the Proposed Project at MP 131. See Section E.1.11.1 and E.1.11.2 for the Air Quality setting, impacts, and mitigation measures along the I-8 route. The future transmission route would then join the proposed route corridor to the west, continuing past the Sycamore Canyon Substation to the Chicarita Substation. See Section D.11.2, D.11.8, and D.11.9 for the Air Quality setting, impacts, and mitigation measures for the Inland Valley and Coastal Links. It could then follow the Proposed Project's 230 kV Future Transmission Expansion route (see description in Section B.2.7) from Chicarita to the Escondido Substation shown in Figure B-12a. See Section D.11.11 for the Air Quality setting, impacts, and mitigation measures for the Future Transmission System Expansion of the Proposed Project.
- Additional 230 and 500 kV circuits could follow the Route D Alternative corridor (see description in Section E.3.1) to the north of Descanso, after following the Interstate 8 Alternative 230 kV route from the Interstate 8 Substation to MP I8 70.3. See Section E.3.11.1 and E.3.11.2 for the Air Quality setting, impacts, and mitigation measures along Route D. The Route D corridor would connect with the Proposed Project corridor at Milepost 114.5, and could then follow either: (1) the Proposed Project southwest to the Chicarita Substation and then follow the Proposed Project's 230 kV Future Transmission Expansion route (see description in Section B.2.7) from Chicarita to the Escondido Substation; or (2) the Proposed Project northeastward to the Proposed Central East Substation and then follow the Proposed Project's 500 kV Future Transmission Expansion route shown in Figure B-12b (see description in Section B.2.7). See Section D.11.2, D.11.7, D.11.8, and D.11.9 for the Air Quality setting, impacts, and mitigation measures for the Central, Inland Valley, and Coastal Links of the Proposed Project. See Section D.11.11 for the Air Quality setting, impacts, and mitigation measures for the Future Transmission System Expansion of the Proposed Project.
- The future 230 and 500 kV lines could follow the Modified Route D Alternative corridor (within the 368 Corridor identified by the Department of Energy's Draft West-wide Corridor Programmatic EIS) south for 8 miles to MP MD-26. See Section E.4.11.1 and E.4.11.2 for the Air Quality setting, impacts, and mitigation measures along Modified Route D. At MP MD-26, new 230 or 500 kV circuits would turn west and connect with the northernmost segment of the West of Forest Alternative route as described in Section E.1.1. See Section E.1.11.5 for the Air Quality setting, impacts, and mitigation measures along MP MD-26 to MP I8-79 corridor. This route would meet up with the Interstate 8 Alternative at approximately MP I8-79 and would follow the Interstate 8 Alternative's overhead 230 kV route to the point where it meets the Proposed Project at MP 131 (for a description of the Interstate 8 transmission corridor see Section E.1.1). The future transmission route would then join the proposed route corridor to the west, continuing past the Sycamore Canyon Substation to the Chicarita Substation. It could then follow the Proposed Project's 230 kV Future Transmission Expansion System (see description in Section B.2.7) from Chicarita to the Escondido Substation. See Section D.11.11 for the Air Quality setting, impacts, and mitigation measures for the Future Transmission System Expansion of the Proposed Project.