

**To:** City of Riverside

**From:** Steve Larson, California Strategies  
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**Date:** October 14, 2022

**Re:** RTRP Fatal Flaw Analysis

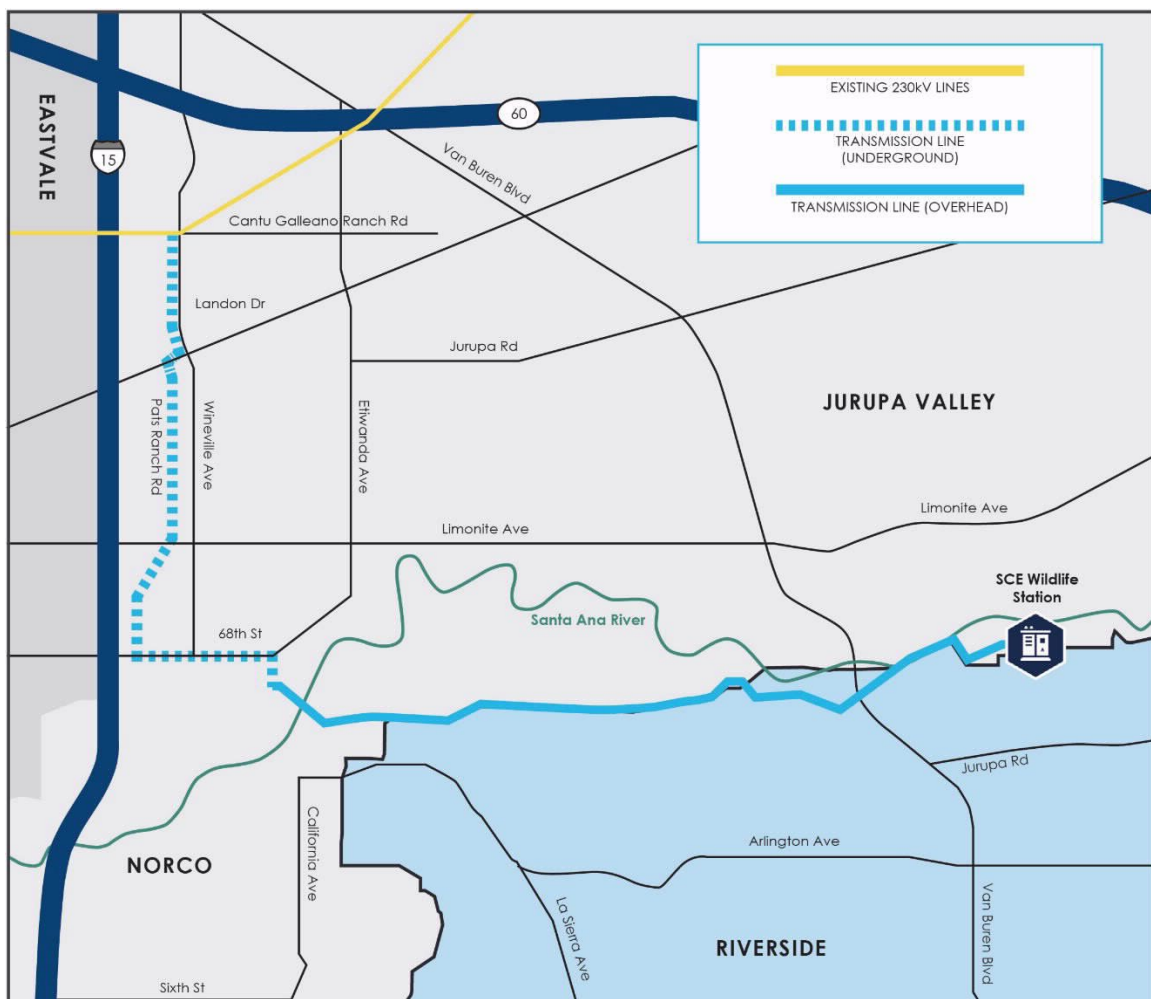
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## 1. Project Background and Objective

### *Project Summary*

Planned jointly by Southern California Edison (“SCE”) and the City of Riverside’s Municipal Utility Department (“RPU”), the Riverside Transmission Reliability Project (“RTRP”) is a new approximately 10-mile, 230 kV transmission line situated in Riverside County that will provide a critical second power connection to the statewide bulk electric system. A map of the proposed project area and transmission line alignment is provided as **Figure 1** below.

**Figure 1: Proposed Alignment of RTRP (2022)**



At present, the RTRP involves the construction of a new 69-kilovolt (kV) Wilderness Substation, 69-kV sub transmission lines, and interconnection and telecommunication facilities to be owned and operated by RPU. In addition, the following proposed project elements will be owned and operated by SCE:

- Approximately 6 miles of new overhead 230-kilovolt (kV) transmission line
- Approximately 4 miles of new underground 230-kV transmission line
- A new 230-kV Wildlife Substation
- Modifications of existing overhead distribution lines
- Modifications at existing substations
- Telecommunication facilities between the existing Mira Loma and Vista Substations and the proposed Wildlife Substation

By adding an additional power connection, the RTRP will improve the reliability and resiliency of RPU's power supply while also providing greater flexibility to meet Riverside's existing and future electrical demand.

### *Project History*

Prior to the project's conception, the City of Riverside ("City") relied on a single power connection from SCE's Vista Substation to supply its energy, providing a system capacity of 557 megawatts (MW). If the electrical needs of RPU customers exceeded the system capacity, the City relied on internal gas generation plants to meet City power demands. While this solution helped supply extra energy in time of peak demands and emergencies, it did not present itself as a reliable, long-term solution to the City's capacity shortage and projected growth. To address this issue, RPU utilized SCE's Federal Energy Regulatory Commission ("FERC")-approved Transmission Owner ("TO") Tariff to request SCE to develop a second interconnection in 2004.

Brought before the California Independent System Operator ("CAISO") in 2006, an independent organization responsible for planning the statewide transmission grid, the Board of Governors approved the request and directed SCE to build the RTRP as soon as possible and preferably no later than June 30, 2009. Preliminary investigations began soon after and RPU and SCE determined that the project required an Environmental Impact Report ("EIR") in accordance with the California Environmental Quality Act ("CEQA") due to potential significant environmental effects. From 2007 to 2011, RPU and SCE proposed and refined route alternatives, collected data, and conducted inter-agency consultation to identify concerns and preemptively mitigate environmental impacts. RPU and SCE also entered into an Interconnection Facilities Agreement in 2008.

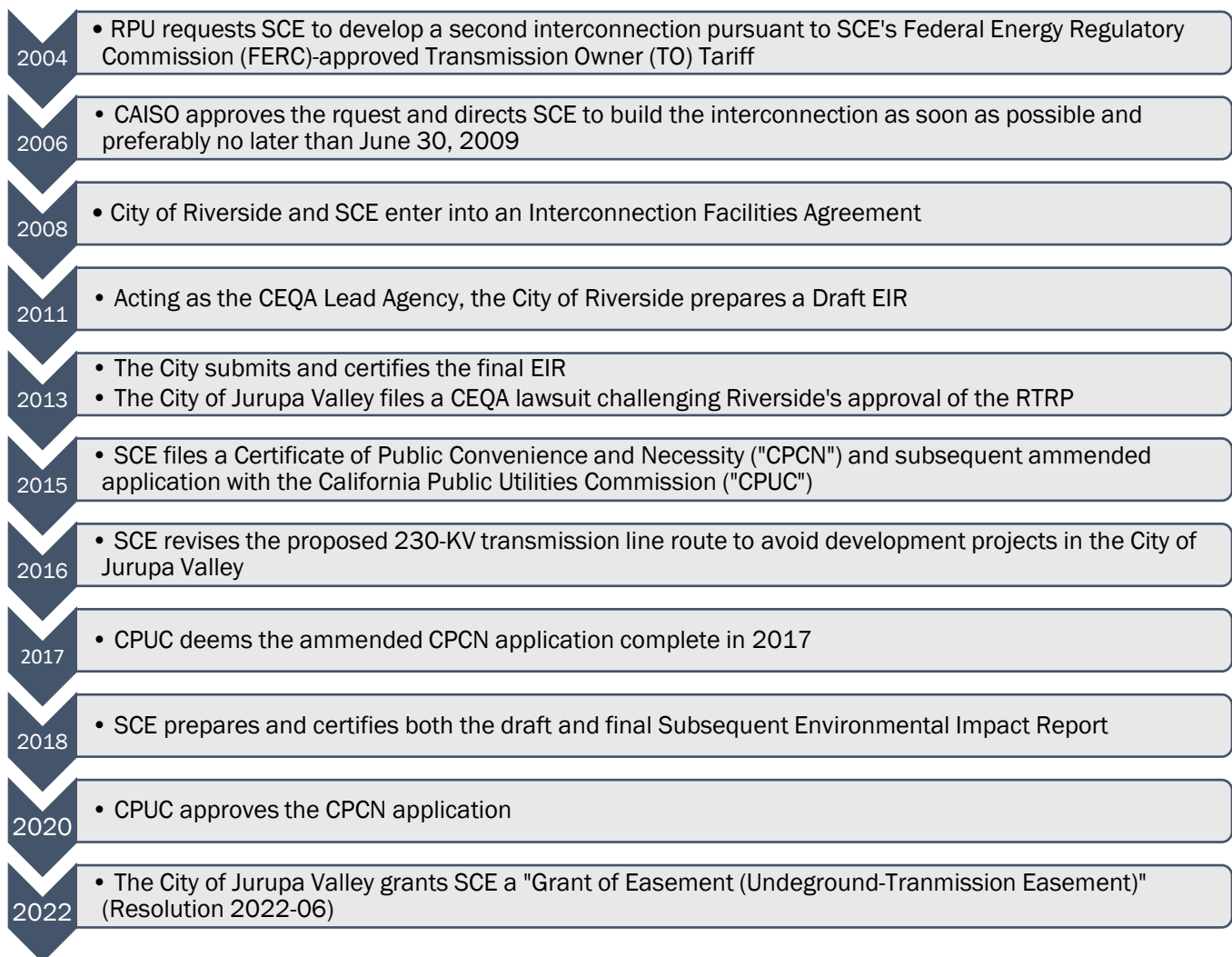
Acting as the CEQA Lead Agency, the City of Riverside prepared a Draft EIR ("DEIR") in 2011 to inform the public and help the City understand the environmental effects of the proposed project before deciding on the RTRP. Since neither the RPU design elements nor the SCE elements could operate independently of one another, the project EIR considered the "whole of the action" under CEQA (CEQA Guidelines §15378[a]). Following comments from the public and agency review, the City submitted its final Environmental Impact Report ("EIR") for the RTRP in 2013.

Following the EIR's certification in 2013, the City of Jurupa Valley ("Jurupa Valley") filed a CEQA lawsuit challenging the City's approval of the RTRP due to perceived significant impacts within their jurisdiction. While the Los Angeles Superior Court denied their challenge, this appeal represented a larger effort from Jurupa Valley to oppose and prevent the development of the RTRP, as approved in 2013. Between 2013 and 2015, Jurupa Valley approved several developments including the Riverbend housing project ("Riverbend") and the Vernola Marketplace Apartment Community ("Vernola Project") within the proposed alignment of the RTRP.

Despite opposition from Jurupa Valley, SCE filed a Certificate of Public Convenience and Necessity ("CPCN") application and subsequent amended application with the California Public Utilities Commission ("CPUC") in 2015 for approval to construct the project. To avoid development conflicts with Jurupa Valley, SCE revised the project in 2016 to underground an approximately 2-mile portion of the 230-kV transmission line through Jurupa Valley's downtown. The CPUC deemed the amended CPCN application complete in 2017.

Due to revisions to the proposed route and potential new significant environmental impacts, the CPUC determined that a Subsequent EIR ("SEIR") was necessary to inform the commission in their decision on whether to approve the CPCN application. RPU prepared an Alternatives Screening Report that presented and analyzed 30 project alternatives and the SEIR was submitted and certified in 2018. Following certification, the CPUC approved the CPCN application in 2020 and RPU published testimony in support of the decision. The final design certified two project alternatives, one referred to as the "Revised Project" and one as "Alternative #1". In 2022, the City of Jurupa granted SCE a "Grant of Easement (Underground-Transmission Easement)" (Resolution 2022-06), meaning that SCE would proceed with construction of the environmentally superior alternative, Alternative #1. A summary of the historic project timeline is provided as **Figure 2** below.

**Figure 2: RTRP Development Timeline**



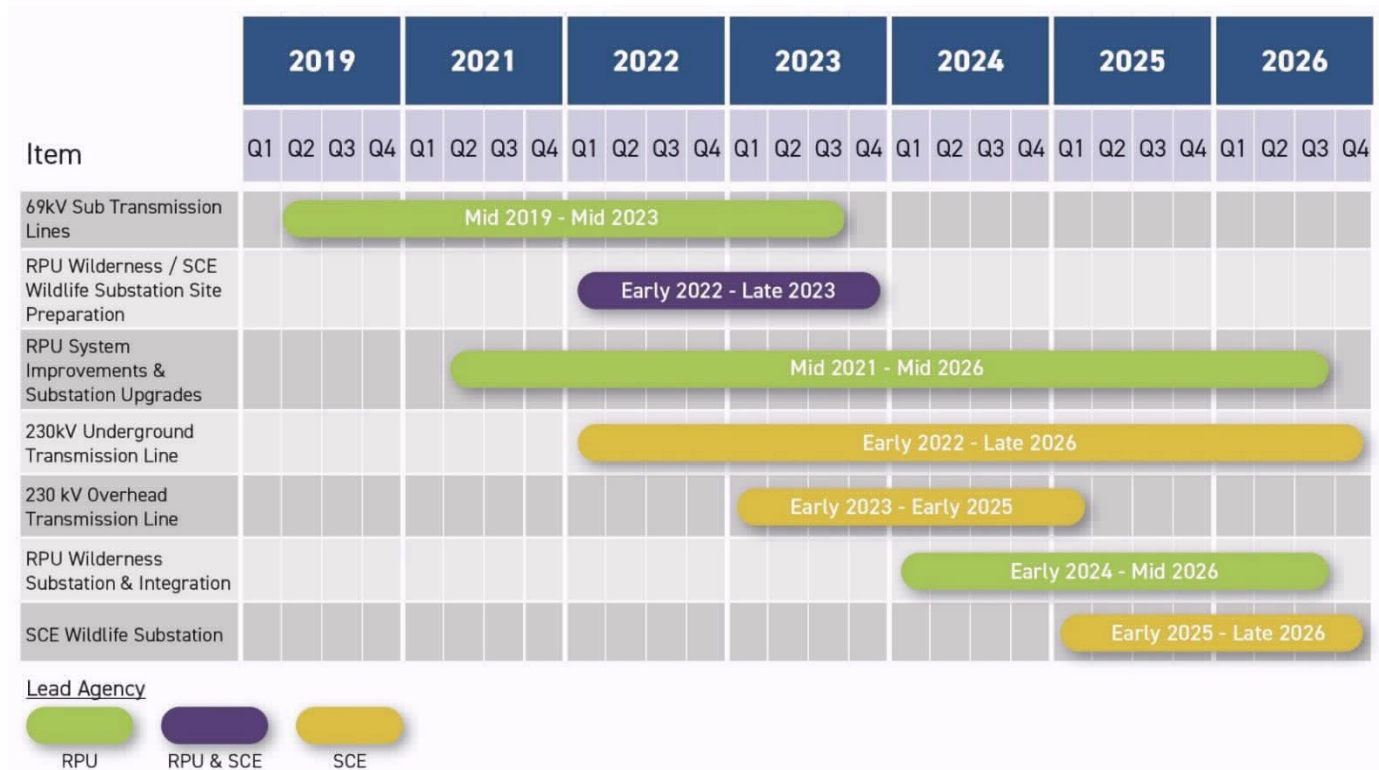
### Project Status

RPU entered into a joint partnership with SCE to develop the RTRP in 2004 and has since completed the necessary preliminary studies and applications to proceed with construction. Project milestones include the following:

- Final Environmental Impact Report (“FEIR”) in 2013
- Subsequent Final Environmental Impact Report (“SEIR”) in 2018
- Certificate of Public Convenience and Necessity (“CPCN”) in 2020

RPU has initiated its construction phase with the development of the 69kV Sub Transmission Lines (Riverside Energy Resource Center to Harvey Lynn Substation & Freeman Substation) and SCE forecasts beginning construction in Q1 of 2023. A summary of the estimated construction timeline is provided as **Figure 3** below.

**Figure 3: Estimated Construction Schedule**



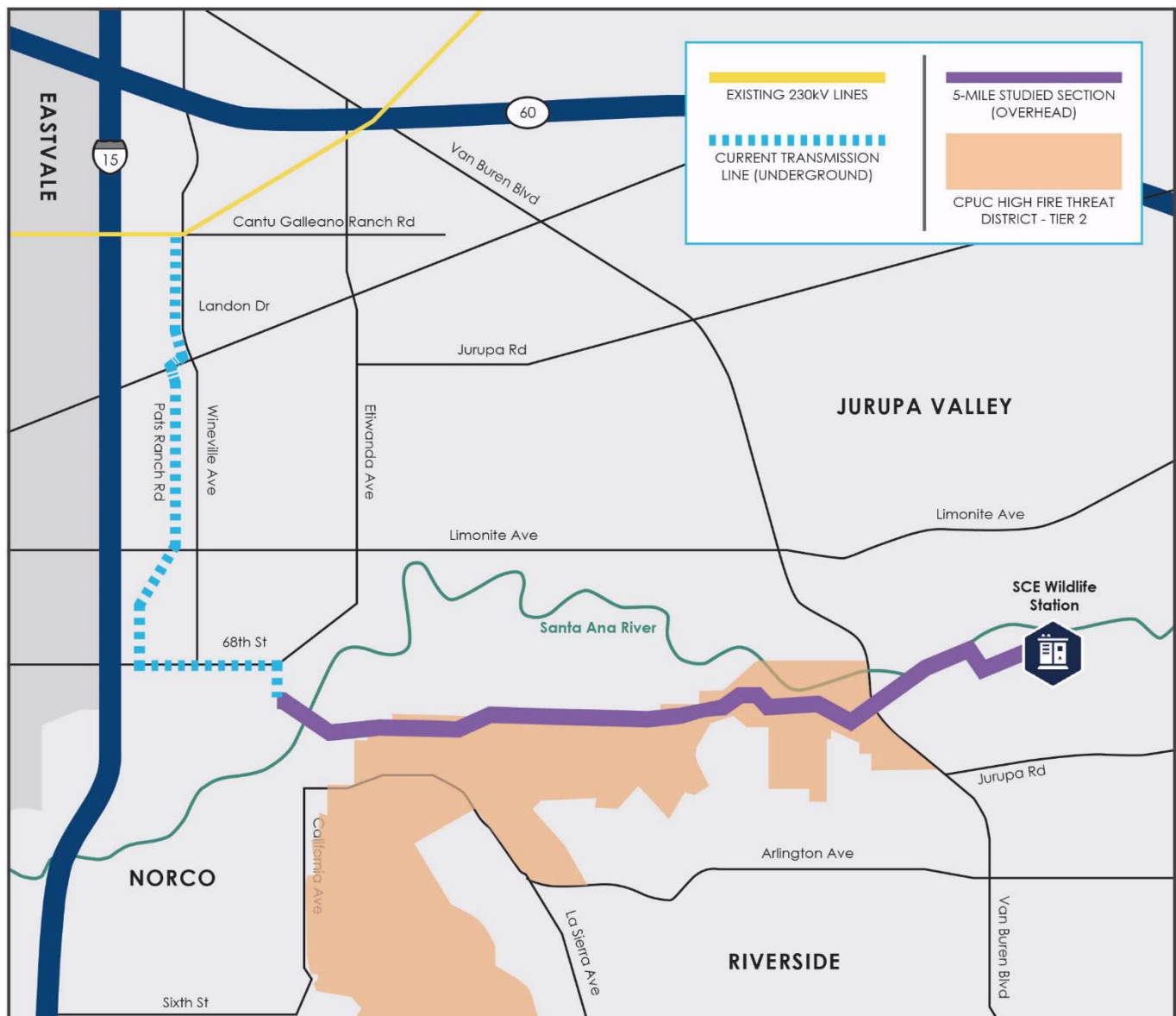
### Project Considerations

Over the nearly 20 years since RTRP’s inception, utilities have made changes to the way they proceed with transmission projects. Actions from regulators and utilities demonstrate both the impact and existence of these changing priorities and concerns of stakeholders. Several areas that have shown recent activity include fire risk mitigation, social justice, and environmental aesthetics. This section summarizes those key areas and attempts to contextualize its relevancy to the RTRP.

### Risk Mitigation

Failure along overhead transmission lines and supporting stations can lead to significant impacts to the City and surrounding area. A utility failure can result in power outages that disrupt essential City operations and can create significant economic and social costs. In addition, a hotter and drier Californian climate means that utility failure carries an even higher risk of wildfire ignition. Since the RTRP travels adjacent to and through a CPUC Tier 2 Fire Zone, overhead lines could present a fire hazard risk to the surrounding community. A map of the CPUC Fire Zones with respect to the RTRP alignment is provided as **Figure 4** below.

**Figure 4: City of Riverside High Fire Threat Map<sup>1</sup>**



<sup>1</sup> <https://ia.cpuc.ca.gov/firemap/>



Recent documented fire events in the project vicinity support the high-risk designation noted in **Figure 4**. From 2017 to 2022, the project site area experienced four documented wildfires within the Santa Ana river basin and Hidden Valley Wildlife Area. While none of the mentioned fires have causes attributed to electrical equipment, this history reaffirms the area's susceptibility to wildfire triggers. The four wildfires are summarized as follows:

- Union Fire (2022)<sup>2</sup>: Burned 110 acres; cause under investigation.
- Lake Fire (2021)<sup>3</sup>: Burned 115 acres; cause under investigation.
- Mann Fire (2020)<sup>4</sup>: Burned 180 acres; cause under investigation.
- Riverdale Fire (2017)<sup>5</sup>: Burned 40 acres; caused by vehicle-related ignition.

Despite only contributing to 9% of wildfire ignitions, utility failure, and especially distribution line failure, disproportionately contributes to California's wildfire crisis and deserves special attention. From 2014-2017, electrical utility failure accounted for 42% of acreage burned in California<sup>6</sup>. Of the 20 most deadly fires in the state's history, 35% of fatalities can be traced to utility-related wildfires.

The following is a summary of several major utility-related incidents:

- *Dixie Fire (2021)*: 960,000 acres burned; \$1.15 B in estimated losses; caused by a fallen tree contacting a PG&E distribution line.
- *Woolsey Fire (2018)*: 96,949 acres burned; \$4.2 B in estimated losses; caused by high winds and poor vegetation management at an SCE electrical equipment site.
- *Camp Fire (2018)*: 153,335 acres burned; \$10 B estimated losses; caused by a poorly maintained PG&E transmission line.
- *Thomas Fire (2017)*: 282,000 acres burned; \$171 M in estimated losses; caused by high winds that forced SCE distribution lines to come in contact with each other.

Established in 2017, the California Public Utility Code §8387 requires publicly owned electric utilities to submit a Wildfire Mitigation Plan to the California Wildfire Safety Advisory Board<sup>7</sup>. In response to this new requirement, utilities have started investing in power line undergrounding to reduce exposure of electrical infrastructure to extreme weather conditions and mitigate utility-driven wildfire risk. With one-third of its electric lines now located in high fire risk areas, PG&E has announced a major new initiative to underground 10,000 miles of power lines within its most high fire risk regions<sup>8</sup>. SCE has also followed suit with 42% or 7,100 miles of their primary distribution lines in high-risk areas now undergrounded<sup>9</sup>.

While this section demonstrates the risk associated with utility related fires, and the response by utilities to address this risk, it should be noted the risk of utility related fires is higher with small transmission and distribution lines as opposed to larger transmission lines such as those included in the RTRP. The higher risk for the smaller power lines is due to the shorter distance from conductors to the ground and because the conductor phases are closer together.

<sup>2</sup> <https://www.fire.ca.gov/incidents/2022/6/25/union-fire/>

<sup>3</sup> <https://www.fire.ca.gov/incidents/2021/5/24/lake-fire/>

<sup>4</sup> <https://www.fire.ca.gov/incidents/2020/3/3/mann-fire/>

<sup>5</sup> <https://www.fire.ca.gov/incidents/2017/12/4/riverdale-fire/>

<sup>6</sup> [https://energysafety.ca.gov/wp-content/uploads/docs/strategic-roadmap/final\\_report\\_wildfiremitigationstrategy\\_wsd.pdf](https://energysafety.ca.gov/wp-content/uploads/docs/strategic-roadmap/final_report_wildfiremitigationstrategy_wsd.pdf)

<sup>7</sup> [https://leginfo.legislature.ca.gov/faces/codes\\_displayText.xhtml?lawCode=PUC&division=4.1.&title=&part=&chapter=6.&article=](https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=PUC&division=4.1.&title=&part=&chapter=6.&article=)

<sup>8</sup> [https://www.pge.com/pge\\_global/common/pdfs/customer-service/other-services/electric-undergrounding-program/PGE-Undergrounding-Fact-Sheet.pdf](https://www.pge.com/pge_global/common/pdfs/customer-service/other-services/electric-undergrounding-program/PGE-Undergrounding-Fact-Sheet.pdf)

<sup>9</sup> [https://download.newsroom.edison.com/create\\_memory\\_file/?f\\_id=5bd9ed7a2cfac247f77ff2f5&content\\_verified=True](https://download.newsroom.edison.com/create_memory_file/?f_id=5bd9ed7a2cfac247f77ff2f5&content_verified=True)

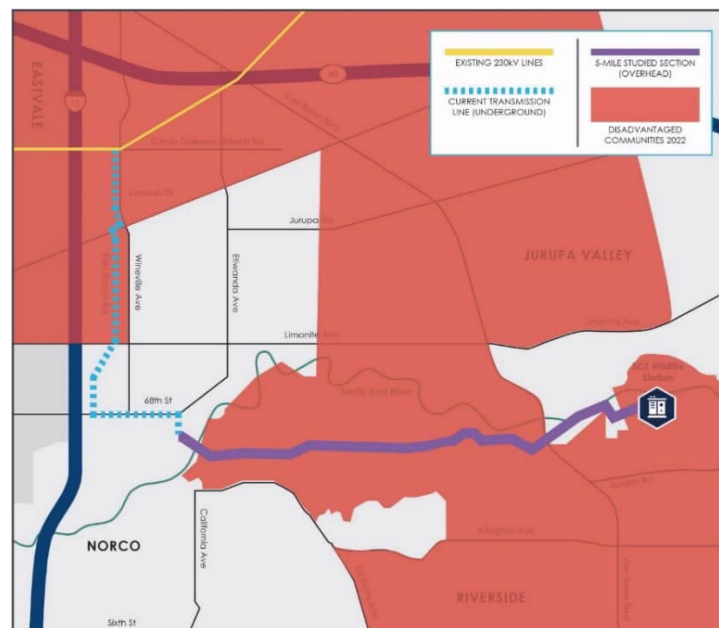
### Social Justice

Due to electrical power's industrial classification, it can adversely impact communities and the surrounding environment when placed in residentially zoned areas. High voltage overhead lines carry the potential for residential fires, diminished property values, and degraded aesthetics. Historically, disadvantaged and low-income communities have been disproportionately affected by industrial development and by extension, utility infrastructure. With a growing public emphasis for social justice, the CPUC has developed an Environmental and Social Justice ("ESJ") Action Plan (Version 2.0 approved April 7, 2022) to serve as a commitment to further the principles of environmental and social justice, as well as an operating framework to integrate ESJ considerations throughout the agency's work<sup>10</sup>. Pertinent to the RTRP, the CPUC requires proposed projects to carefully consider the impact it has on different communities under the lens of equitability.

During the CPCN application process, the City of Jurupa Valley successfully argued their case to the CPUC for an underground line through their residentially zoned area as it relates to social justice. Traveling through a statutorily designated Disadvantaged Community<sup>11</sup> and an area already suffering a pollution burden in the 97th percentile, the RTRP originally proposed to place overhead power lines through a historically marginalized community. Due to the adverse impacts industrial developments have on communities, this would create social justice issues that go directly against CPUC's ESJ Action Plan.

Within the City of Riverside, a similar issue arises for social justice. The proposed 5-mile alignment from the Goose Creek Golf Club to the proposed Wildlife Substation travels through a mix of open space and residential zoning, an area also statutorily designated by the California Office of Environmental Health Hazard Assessment (OEHHA) as a Disadvantaged Community and a 96th percentile pollution burden. A map of Disadvantaged Communities in the Riverside portion of RTRP is shown as **Figure 5** below.

**Figure 5:** Disadvantaged Community Map in Riverside Portion of RTRP



<sup>10</sup> <https://www.cpuc.ca.gov/news-and-updates/newsroom/environmental-and-social-justice-action-plan>

<sup>11</sup> <https://oehha.ca.gov/calenviroscreen/sb535>

Since all of the Riverside portion of the RTRP travels through a SB 535 Disadvantaged Community, it is important that the project considers the potential social impact overhead lines may have on the neighboring community.

### ***Environmental Aesthetics***

Utility infrastructure projects can present a significant impact to environmental aesthetics. Overhead lines in particular impact aesthetics, as the large steel structures and power lines obstruct natural views and clash with the aesthetics of non-industrial zones. The current RTRP alignment traverses the Hidden Valley Wildlife Area (HVWA), land that was specifically acquired and designated for open space and recreational use. Since the project seeks to construct large, above-ground utility structures in an area designated for open space, the above ground transmission lines may negatively impact the aesthetics of the wildlife area.

Following the submittal of the Subsequent DEIR, the City received several concerns from stakeholders with respect to the environmental aesthetics of the proposed Riverside section of the RTRP. As mentioned previously, the RTRP traverses through the HVWA, land funded by the Land and Water Conservation Fund (“LWCF”) with the explicit goal of safeguarding natural areas, water resources, cultural heritage, and recreational opportunities. In response to the proposed annexation of 10.8 acres of HVWA LWCF funded lands, the City of Jurupa Valley argued that due to the land designation, the city should evaluate alternatives that involve undergrounding the RTRP through the HVWA<sup>12</sup>. Since the 2018 Subsequent EIR conceded that undergrounding significant portions of the RTRP was not only feasible, but also the preferred and environmentally superior option among alternatives, they argued that RPU and SCE should consider undergrounding as a potential method of minimizing environmental aesthetic impacts.

### ***Objective***

At present, the new transmission project proposes to construct approximately 5 miles of 230kV transmission lines using overhead construction through Riverside. However, due to changing project conditions and considerations noted in previous sections, RPU has elected to evaluate the proposed alternative of constructing the entirety or a portion of the 5-mile 230 kV transmission line using methods of underground construction.

The objective of this report is to provide information to RPU decision makers regarding undergrounding options, impacts, and potential paths to implementation.

To accomplish this objective, the report has been structured into the following sections:

- Section 1: Project Background and Objective
- Section 2: Project Alternatives
- Section 3: Risk and Impact Evaluation
- Section 4: Implementation
- Section 5: Funding

## **2. Project Alternatives**

### ***What is Undergrounding?***

Undergrounding refers to the construction of new electric lines or the conversion of existing overhead electric facilities underground. Despite typically being more expensive than overhead lines, utility planners may decide to opt for an underground system for safety, cost, reliability, or maintenance reasons. With proper planning, undergrounding

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<sup>12</sup> [https://ia.cpuc.ca.gov/environment/info/panoramaenv/RTRP/PDF/Public\\_Comments/Organization\\_comments.pdf](https://ia.cpuc.ca.gov/environment/info/panoramaenv/RTRP/PDF/Public_Comments/Organization_comments.pdf)



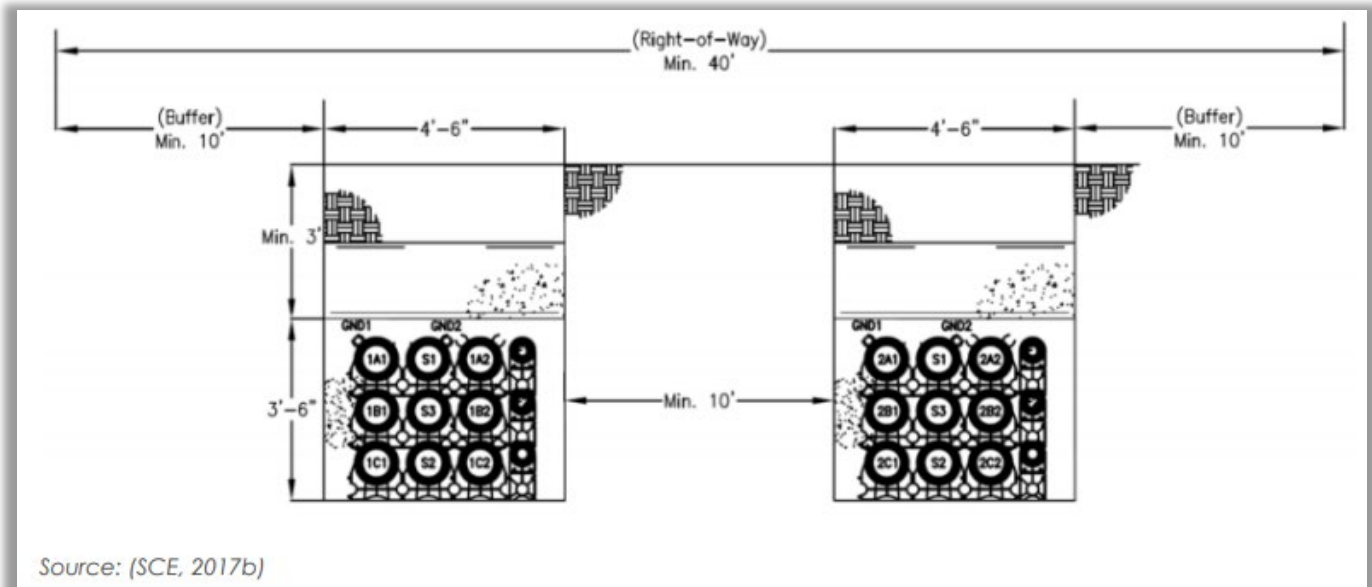
electric transmission lines can significantly contribute to the beautification of residential and recreational aesthetics, a rise in surrounding property values, enhanced electric reliability, and the mitigation of utility-related wildfire ignition.

Due to the aforementioned benefits and growing acceptance of undergrounding, several notable public and private utility agencies have moved to convert their existing above ground power lines in favor of undergrounding. Some notable initiatives include PG&E's pledge to underground 10,000 miles of power lines and the City of San Diego's partnership with SDG&E to underground 15 miles of power lines per year. The following are a few project examples:

- Scattergood-Olympic Cable A Transmission Project, LADWP (2018)<sup>13</sup>: The LADWP constructed a 11.4-mile 230-kV underground transmission line to replace its aging power infrastructure.
- Tehachapi Renewable Transmission Project, Chino Hills (2013)<sup>14</sup>: In partnership with the City of Chino Hills, SCE undergrounded an approximate 3.7-mile portion of the Mira Loma-Vincent 500 kV transmission line to reduce the impact of overhead lines on Chino Hills residents.
- Sycamore to Peñasquitos 230-kV Transmission Line, City of San Diego (2018)<sup>15</sup>: In partnership with the City of San Diego, SDG&E constructed a 15-mile 230-kV transmission line underground to improve reliability, ensure safety, and improve visual aesthetics.

The RTRP's scope was previously modified to incorporate undergrounding through portions of the proposed alignment. After considering the potential social, economic, and environmental impacts of the overhead route through the City of Jurupa Valley, CPUC ordered SCE and RPU to underground approximately 4 miles of the RTRP. The design involves two 230-kV double-circuit transmission lines placed in parallel buried, concrete-encased duct banks. A cross section of a typical underground configuration is provided as **Figure 6** below

**Figure 6:** Typical 230-kV Double-Circuit Underground Duct Bank Configuration



<sup>13</sup> <https://www.ladwpnews.com/ladwp-completes-construction-of-the-largest-underground-transmission-line-in-the-city-of-los-angeles/>

<sup>14</sup> <https://www.chinohills.org/DocumentCenter/View/10137/TRTP-Undergrounding-Construction-Update-September-23-2014-PowerPoint?bidId=>

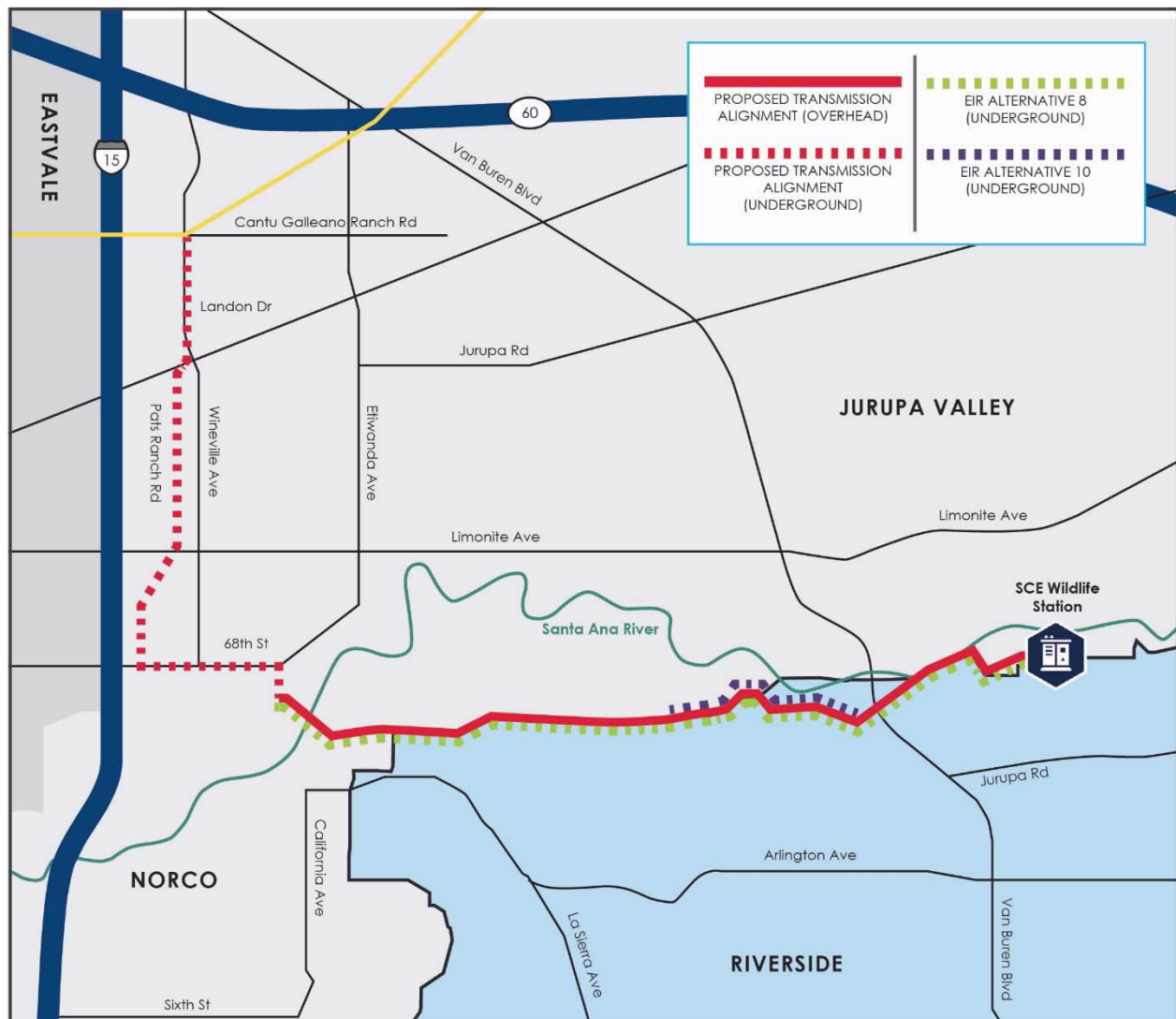
<sup>15</sup> <https://www.sdge.com/major-projects/sycamore-penasquitos-230-kv-transmission-line-project>

### Existing Project Alternatives

The current approved route is referred to as “Alternative #1” and includes 10 miles of 230-kV transmission lines with associated substations, sub transmission lines, and interconnection and telecommunication facilities. As a result of concerns over the impact of overhead lines through the City of Jurupa Valley, Alternative #1 incorporates approximately 4 miles of undergrounded transmission lines through a portion of Jurupa Valley, leaving approximately 6 miles above ground.

During the development of the Subsequent EIR, several alternatives were proposed that considered undergrounding portions of the proposed route. For the scope of this report, only the alternative configurations along Alternative #1’s current route in Riverside’s jurisdiction were reviewed. A map of the current project configuration and the reviewed alternatives is provided as **Figure 7** below.

**Figure 7: Current RTRP Alignment and Alternative Routes**



#### EIR Alternative 8: All Underground Transmission Line

The EIR Alternative 8 route encompasses the “all underground” scenario and follows the 2013 RTRP and revised project alignment. The 230-kV transmission line would be undergrounded throughout the Riverside portion of the project from the Goose Creek Golf Club to the proposed Wildlife Substation, inclusive of the Santa Ana River crossing and segments south of the Santa Ana River.

While this alternative achieves the basic project objectives and potentially meets criteria for technical, legal, and regulatory feasibility, the environmental screening determined that the alternative would contribute to greater environmental impacts compared to other alternatives. Special concern was given to the Santa Ana River crossing, in which high groundwater levels would make the alternative infeasible. Additionally, undergrounding through the surrounding riparian and wetland habitat could result in the potential for entrapment of terrestrial animals due to open trenches.

#### EIR Alternative 10: Idyllwild Ln, Julian Dr, and Bradford St. Underground

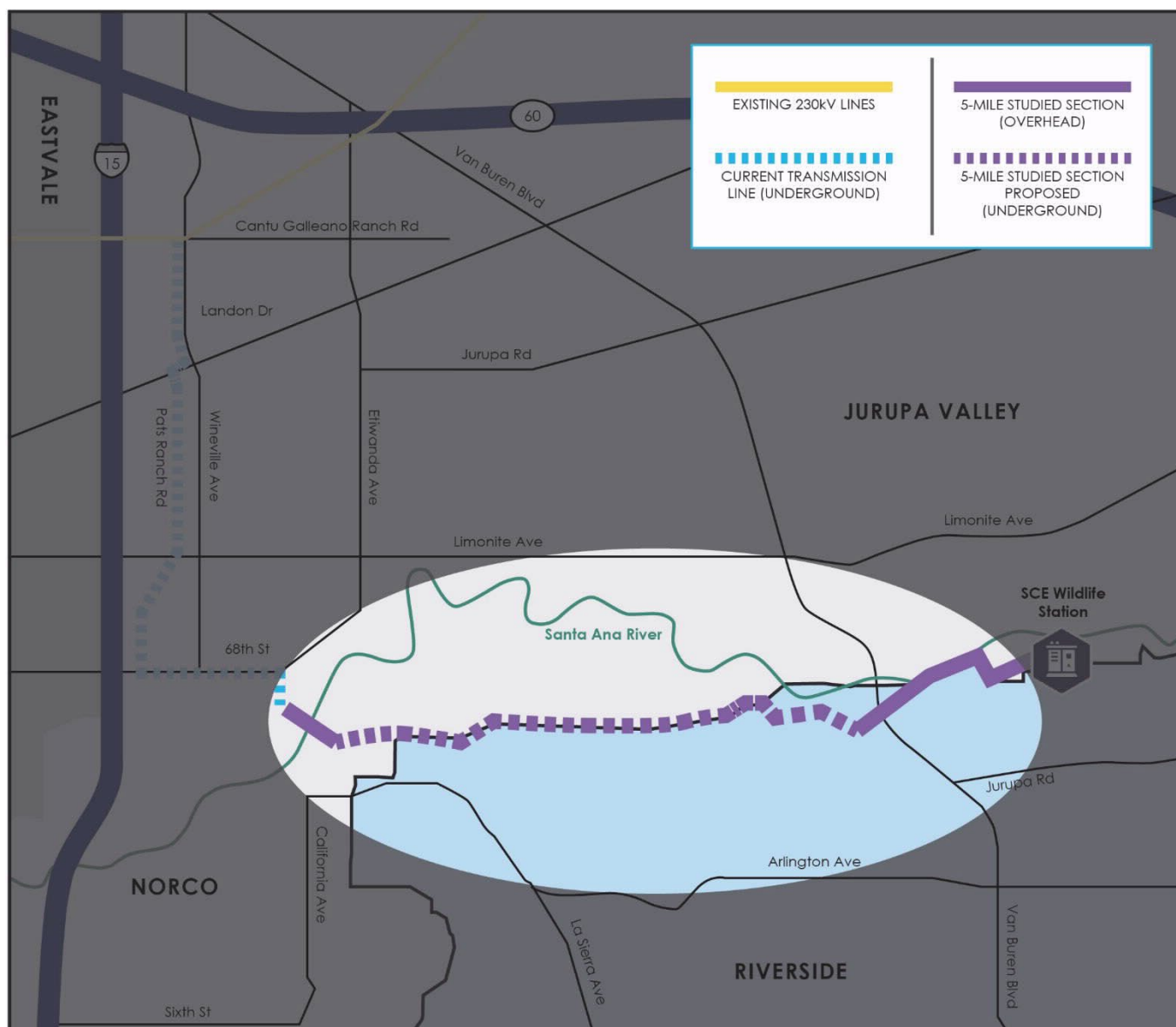
The EIR Alternative 10 route follows the 2013 RTRP alignment and revised project alignment with a 1-mile segment located underground on the south side of the Santa Ana River. The transmission line would transition to an underground position north of Tyler Street in the City of Riverside and continue underground north of the residential community on Auld Street, Julian Drive, Idyllwild Lane, Rutland Avenues, and Bradford Street. The alternative alignment would return to an overhead position before crossing Van Buren Boulevard and would follow the remainder of the approved route to the Wildlife Substation. By undergrounding only the portion of the revised project alignment that intersects a residential zone in Riverside, this alternative mitigates the potential impact to social justice without incurring environmental impacts to the Santa Ana River and surrounding wetland impact.

Similar to Alternative 8, while this alternative achieves the basic project objectives and potentially meets the criteria for technical, legal, and regulatory feasibility, the environmental screening determined that the alternative has the potential to create additional environmental impacts including aesthetic, biological resource, cultural resource, and noise impacts.

#### ***Hybrid Alternative***

To address the shortfalls of the previous alternatives while also addressing the revised RTRP’s anticipated impacts to social justice, environmental aesthetics, and wildfire mitigation efforts, the following proposed alternative (“Hybrid Alternative”) was developed and is attached as **Figure 8**.

**Figure 8:** Proposed Hybrid Alternative for Riverside Portion of RTRP



The Hybrid Alternative route still follows the Alternative #1 alignment but includes an approximately 3.5-mile underground section from south of the Santa Ana River to Van Buren Boulevard. This alternative attempts to mitigate environmental impacts to the Santa Ana River and surrounding wetland while also reducing aesthetic impacts to the Hidden Valley Wildlife Area (“HVWA”), social impacts to the residentially zoned neighborhood between the HVWA and Van Buren Boulevard, and wildfire risk. A qualitative alternatives decision matrix has been provided as **Table 1**.

Table 1: Alternatives Decision Matrix

	Social Justice	Environmental Aesthetics	Risk Mitigation	Environmental Protection
<b>Baseline<sup>1</sup></b>	<u>No mitigation</u> for social justice impact	<u>No mitigation</u> for environmental aesthetics impact	<u>No mitigation</u> for wildfire risk	Minimizes significant environmental impacts
<b>EIR Alternative 8</b>	+	+	+	-
<b>EIR Alternative 10</b>	+	0	<u>0</u>	0
<b>Hybrid Alternative</b>	+	+	+	0

Notes<sup>1</sup>: Baseline alternative is Alternative #1 from 2020 CPCN. A (+) indicates anticipated improvement over baseline, a (0) indicates potentially no change in impact and a (-) indicates a potential increased impact over the baseline.

### 3. Risk and Impact Evaluation

#### *Project Importance*

Currently, all of RPU's imported energy is sourced from a single power connection to SCE's Vista Substation. If the electrical needs of RPU customers exceeds the imported system capacity of 557 megawatts, the City relies on three internal gas generation facilities to meet the supply deficit. While this solution helps supply extra energy during peak demands and emergencies, it does not present a reliable, long-term solution to the city's current capacity shortage and projected energy load growth.

As the only major Southern Californian city of its size without multiple connections, a second connection to the California electric grid is critical to RPU's ability to meet future capacity needs and provide redundancy in the event of any natural disaster, accident, or other unanticipated event. In support of the RTRP, several key stakeholders noted the reliability as critical during the preparation of the SEIR process and cited potential benefits for attracting and retaining business in the region.

In addition to benefits to the City's electrical grid, RPU has a financial incentive to see the project through to completion. According to Order No. 679, SCE is entitled to 100% of prudently incurred costs, including pre-commercial expenses and construction costs, if the RTRP is abandoned due to an event beyond SCE's control.

### ***Modification Process***

If the City decides to underground a portion or all of the 230-kV transmission line within Riverside jurisdiction, the Riverside City Council ("Council") would follow the step-by-step process outlined in this section to modify the existing CPUC and FERC approvals.

#### **Step #1: Resolution and Task Force Creation**

The Council will need to approve a Resolution in support of the specific undergrounding alternative selected by the Council, which includes a Task Force to implement the Resolution. Since SCE is unlikely to move in support of an additional undergrounding effort without considerable observable support from within the political community, this Task Force should include at a minimum, a representative of the Council, the City, and RPU, with others as needed. In addition, the Council should assign a Task Force Administrator capable of advising the Task Force and other groups about the regulatory environment. This administrator should be selected through a competitive process, as quickly as possible.

#### **Step #2: Organizational Efforts**

The goal of the Task Force will be to achieve undergrounding as desired by the City as quickly as possible. During this step of the modification process, the Task Force will complete all necessary organizational efforts including stakeholder identification, agency outreach, and pre-construction schedule development. Key milestones for this step include the following actions:

- Create a coalition of local and state elected officials who support the project
- Establish a working relationship with SCE aimed at an agreement to proceed with CPUC approvals
- Contact CAISO and FERC to determine what approvals may be needed
- Establish links and work plans aimed at meeting the requirements of SCE and agency relationships
- Develop a pre-construction schedule that considers anticipated approval timelines and required Task Force activities

#### **Step #3: Funding Source Identification**

As discussed in Section 5, the Transmission Access Charge ("TAC") is the typical source of funding for transmission-related projects. However, should the CPUC decide to limit the burden of project expenses on the rate payer, additional funding will be required. During this step, the Task Force should explore unconventional funding sources such as pilot funding programs. Additional funding sources could include state funding (CEC, separate funding through the State budget process, etc.) as well as federal funding.

#### **Step #4: CEQA Investigation**

Since the proposed alternatives have the potential to create significant environmental impacts, it is likely that the Subsequent EIR will need to be re-evaluated. During this step of the modification process, the Task Force will identify the modified project's new environmental impacts and select the appropriate variation of an EIR. The City will complete a Draft EIR, follow notice and public review processes, and submit the final EIR during this step.

Since only minor changes would be necessary to make the previous EIR apply to the project in the changed position, this report anticipates that the City may qualify for a "Supplement to an EIR".



#### Step #5: CPCN Petition of Modification

Any of the introduced alternatives in Section 2 would result in substantial modifications to the Alternative #1 route proposed in the approved CPCN application (A.15-04-13). Per Order No. 8 of the CPCN decision, if a project refinement leads to a new or increased significant impact, then a petition to modify the CPCN decision must be filed. Since the Hybrid Alternative may result in significant environmental impacts associated with additional underground construction, SCE would be required to submit a Petition for Modification to its CPCN Application 15-04-13.

As the final step in the process, the Task Force would assist SCE as needed with the Petition of Modification for CPUC and provide them with the completed EIR, approvals identified in Step #2, and potential funding sources. Once the Petition for Modification is approved, the project can proceed to construction.

## 4. Implementation

### *Anticipated Cost*

Under the assumption that the City proceeds with Alternative #1, the 2020 CPCN authorized a \$521 million maximum cost with a 15% contingency included to complete SCE's scope of the RTRP. Due to additional costs associated with undergrounding transmission lines, any of the three evaluated alternatives (EIR Alternative 8, EIR Alternative 10, and Hybrid Alternative) would result in a total cost in exceedance of the authorized budget.

Since the benefits associated with adopting one of the alternatives may justify the additional cost, the reasonableness of exceeding the authorized budget would be evaluated by the CPUC pursuant to Public Utilities Code § 1005.5(b). For the purpose of this report, a cost comparison of the currently proposed Alternative #1 and the three alternatives is provided as **Table 2**.

Table 2: Comparative Summary of Cost Estimates for RTRP Alternatives				
Network Upgrades (SCE)	Alternative #1	Hybrid Alternative	EIR Alternative 8	EIR Alternative 10
Prelim. Engineering, Licensing & Permitting	20	20	20	20
Substation	19	19	19	19
Substation Reactive Compensation	n/a	n/a	n/a	n/a
Transmission - Overhead (OH)	40	17	0	33
Transmission - Underground (UG)	241	447	591	304
Telecom	2	2	2	2
Transmission Telecom	1	1	1	1
Power System Control	0.1	0.1	0.1	0.1
Real Properties	44	33	20	33
Environmental	6	6	6	6
Known Risks	80	100	120	90
<b>Direct Cost</b>	<b>454</b>	<b>645</b>	<b>779</b>	<b>508</b>
<b>Contingency</b>	<b>68</b>	<b>97</b>	<b>117</b>	<b>76</b>
<b>Total Network Upgrades</b>	<b>521</b>	<b>742</b>	<b>896</b>	<b>584</b>
Note 1: Hybrid Alternative ~7.5 mi UG; EIR Alternative #8 ~9.9 mi UG; EIR Alternative #10 ~5.1 mi UG				
Note 2: All values given in magnitude of millions of \$				

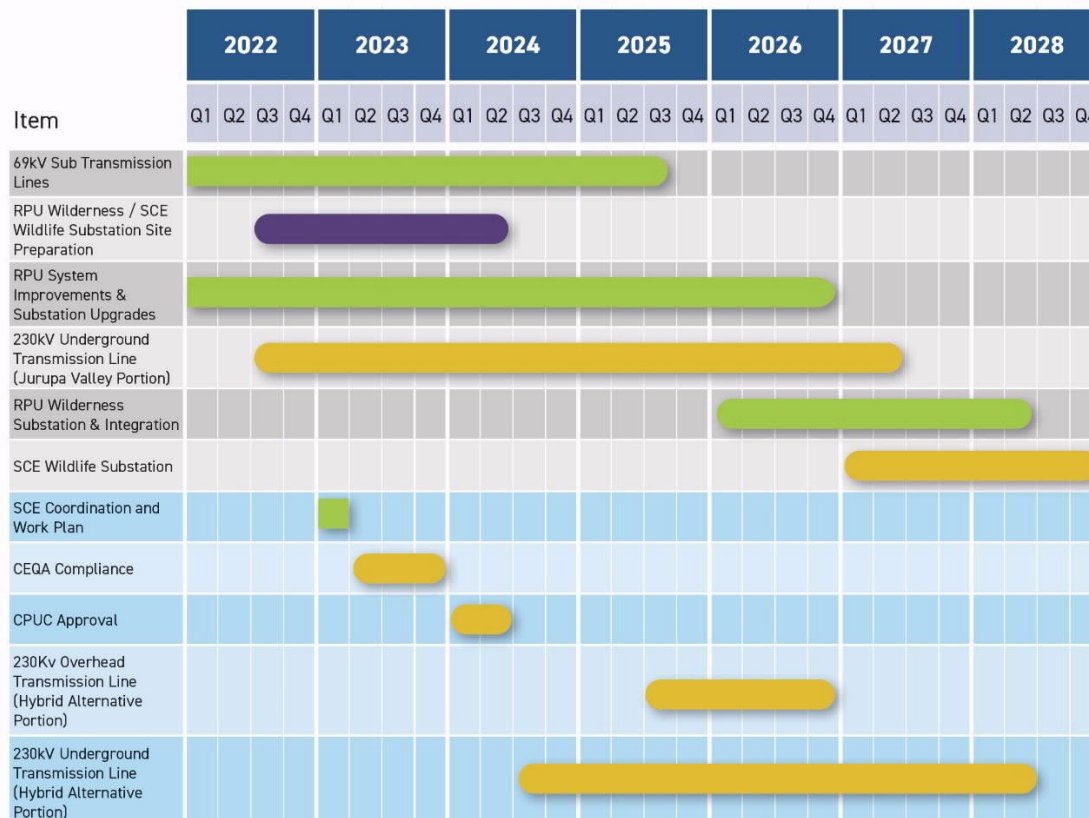
The above cost estimate was derived from unit costs from Table 2 in SCE's Direct Testimony<sup>16</sup> (2019). Adopting the Hybrid Alternative resulted in a 42% increase to the total project cost with a per mile cost of approximately 59.7 million. Compared to SCE's overhead lines per mile cost of approximately 6.9 million, the cost of underground was nearly 8.7 times more expensive.

Undergrounding cost is extremely site-specific, especially for high voltage lines, and can greatly depend on surrounding land use, subsurface composition, and electrical configuration used. For example, the Los Angeles Department of Water and Power ("LAWDP") completed a 11.4-mile 230-kV transmission undergrounding project at an approximate cost of \$11.4 million per mile, which was significantly less than the \$59.7 million per mile cost for the RTRP.

### ***Estimated Schedule***

When the California Independent System Operator ("CAISO") board approved RPU's request to develop a second connection in 2006, it did so with the intention of initiating construction as soon as possible and preferably no later than June 30, 2009. However, due to planning delays and revisions to the 230-KV transmission line's alignment and configuration, RPU and SCE did not get approval for construction until the certification of the CPCN in 2020. With a project history that spans nearly 20 years, it is important that the City proceeds towards construction. For the purpose of this report, an estimated timeline of modifying the RTRP to follow one of the proposed alternatives is provided below as **Figure 9**.

**Figure 9: Estimated Probable Timeline for RTRP Modification**



<sup>16</sup> <https://www.jurupavalley.org/DocumentCenter/View/594/Southern-California-Edison-SCE-DirectTestimony--ALJ-Formal-Proceedings-Hearing-03-01-2019-PDF>

## 5. Funding

### *Sources of Funding*

The Transmission Access Charge (“TAC”) is the typical source of funding for transmission-related projects and would be expected to help fund anticipated costs in excess of the authorized \$521 million budget. However, in the scenario that the CPUC limits the applicability of TAC cost recovery, the City may need to pursue additional funding at the state and federal level. A discussion of the TAC, as well as other potential funding sources is included below.

#### Transmission Access Charge

The California Independent System Operator Corporation’s (“CAISO”) Transmission Access Charge (“TAC”) is a two-part rate for each megawatt hour of internal load and exports. Revenue requirements for facilities rated 200-kV and above are recovered through a system-wide rate, while requirements for facilities rated below 200-kV are recovered via specific rates for each Participating Transmission Owner (“PTO”). The purpose of the TAC is to provide cost recovery for PTOs and each PTO is authorized to recover an annual amount equal to its Transmission Revenue Requirement (“TRR”) approved by the Federal Energy Regulatory Commission (“FERC”).

In 2020, the FERC granted SCE’s request for rolled in rate treatment and cost recovery under the CAISO TAC. Pursuant to FERC’s Order No. 679, an applicant may seek to obtain incentive rate treatment for a transmission infrastructure investment that “ensure[s] reliability or reduce[s] the cost of delivered power by reducing transmission congestion”. Since the three alternatives would still include the proposed 230-kV transmission line and only seek to modify its configuration, the project would still result in improved reliability and the 2020 decision should still apply to additional undergrounding. However, the ultimate decision of TAC applicability would be determined by the FERC after certification of a new CPCN.

#### Other Funding Opportunities

Should the CPUC determine that the additional costs incurred by undergrounding are not applicable or only partially applicable to TAC cost recovery, the City will need to explore other funding opportunities. One option is to target funding on the federal level and identify pilot funding programs to underground utility lines in areas of elevated wildfire risk or social/economic inequality. Another option is to pursue funding on a state level, such as funding through the California Energy Commission’s clean energy initiatives or separate funding through the state budget process.

### *Exceeding Project Budget*

Any modification to the current RTRP that results in additional costs may meet resistance from local stakeholders and advocate organizations. The Public Advocates Office (“POA”), who advocate for the lowest possible monthly bills for customers of California’s regulated utilities, has a history of opposition to the RTRP and has previously lobbied in an effort to modify or halt the project.