

# CEC JOINT WORKSHOP ON TACTICAL DECOMMISSIONING

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# Strategic Pathways and Analytics for Tactical Decommissioning of Portions of Natural Gas Infrastructure in Southern California | Agenda

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- Decarbonization Business Transformation
- Project Description, Goals and Objective
- SoCalGas/Gas Technology Institute Analysis
- Proposed Management Structure
- Timeline

# Strategic Pathways and Analytics for Tactical Decommissioning of Portions of Natural Gas Infrastructure in Southern California | Decarbonization Business Transformation

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- Goal Setting – Aspire 2045
- Decarbonization Modeling – Economywide and SoCalGas System
- Integrated Energy System Planning
  - Clean Fuels Deployment and Electrification
  - Assessing Decommissioning
  - Cost Allocation and Rate Design
- Public Interest Guideposts (codified)
  - Reliability, Safety, J & R Rates/Affordability – “Essential” Service for Core
  - Climate Policy and Emissions Reductions



# Strategic Pathways and Analytics for Tactical Decommissioning of Portions of Natural Gas Infrastructure in Southern California | Aspire Net Zero Commitment



SoCalGas ASPIRE. [https://www.socalgas.com/sites/default/files/2021-03/SoCalGas\\_Climate\\_Commitment.pdf](https://www.socalgas.com/sites/default/files/2021-03/SoCalGas_Climate_Commitment.pdf)

# Strategic Pathways and Analytics for Tactical Decommissioning of Portions of Natural Gas Infrastructure in Southern California | Economy-Wide Decarbonization Modeling

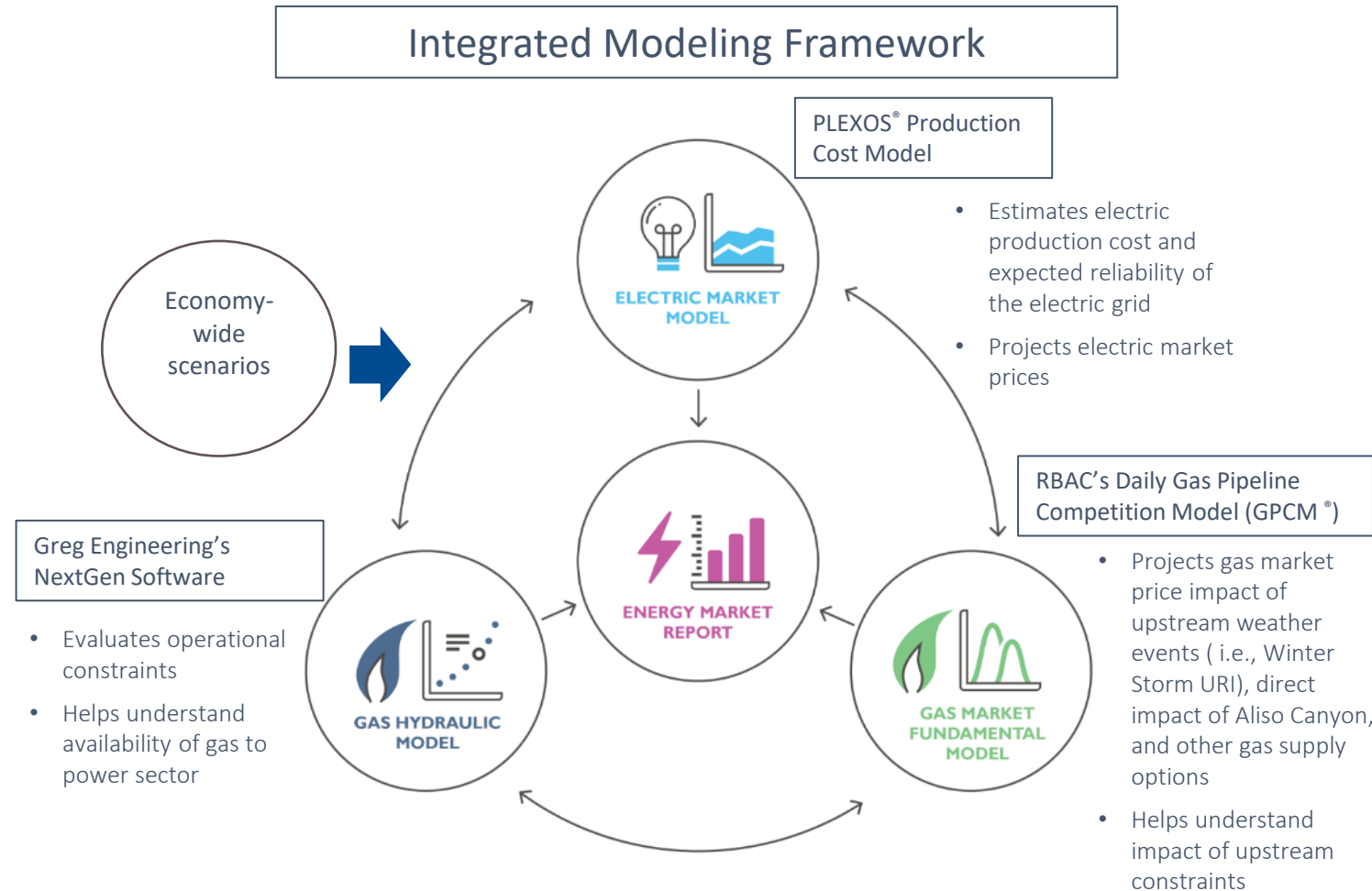
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- Economy-wide decarbonization modeling examining role of clean fuels and clean fuels network in a decarbonized end-state
- Key questions:
  - What are California's options for achieving carbon neutrality?
  - What decarbonization solutions are resilient, affordable, and address hard-to-abate economic sectors?
  - How can gas infrastructure advance the clean energy transition?
- *The Role of Clean Fuels and Gas Infrastructure in Achieving California's Net-Zero Climate Goal* (October 2021)
  - [https://www.socalgas.com/sites/default/files/2021-10/Roles\\_Clean\\_Fuels\\_Full\\_Report.pdf](https://www.socalgas.com/sites/default/files/2021-10/Roles_Clean_Fuels_Full_Report.pdf)

# Strategic Pathways and Analytics for Tactical Decommissioning of Portions of Natural Gas Infrastructure in Southern California | SoCalGas System Modeling and Planning

- In advancing potential 2045 scenarios, the trajectory for meeting the state’s climate targets must be examined with a greater level of granularity to be of value to the gas system planning process
- The SoCalGas Integrated Model takes a more granular look into the SoCalGas system evaluating the demand assumptions and supply outputs of the broader decarbonization models:

- Analyze existing statewide decarbonization demand scenarios
- Analyze projections around EG ramps and electrification on gas systems
- Analyze potential changes impacts to system reliability
- Examine infrastructure needs: decommissioning and clean fuel delivery
- Assess energy market and customer rates impacts



# Strategic Pathways and Analytics for Tactical Decommissioning of Portions of Natural Gas Infrastructure in Southern California | Overview

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## Goal:

- Develop an objective analytical framework to identify where natural gas decommissioning in Southern California will:
  - 1) Serve the interest of affected communities
  - 2) Lead to net economic and societal benefits
  - 3) Be plausible under a wide range of possible futures

## Objectives:

- 1) Develop a framework with a set of criteria for identifying and selecting promising decommissioning sites
- 2) Identify and understand community and utility decision criteria. Model equity concerns.
- 3) Assess economic implication of decommissioning (macro-economic model to determine effects on rate payers and hydraulic model to determine local effects of decommissioning) – SoCalGas and GTI leading
- 4) Conduct decision analysis under deep uncertainty to inform robust planning for targeted decommissioning
- 5) Draft at least three pilot applications for decommissioning natural gas infrastructure

# Strategic Pathways and Analytics for Tactical Decommissioning of Portions of Natural Gas Infrastructure in Southern California | SoCalGas' Role

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- Advancing a transparent gas system planning approach as part of the CPUC Gas System Planning OIR
- To better understand, plan and educate stakeholders, internally and externally, as part of this CEC project, we are collaborating with GTI to:
  - Evaluate operational consequences of altering gas flow on select pipelines of a local distribution system
  - Evaluate costs of decommissioning and model rate payer impacts
  - Evaluate the costs of alternatives to fossil natural gas



# Strategic Pathways and Analytics for Tactical Decommissioning of Portions of Natural Gas Infrastructure in Southern California | Hydraulic Modeling

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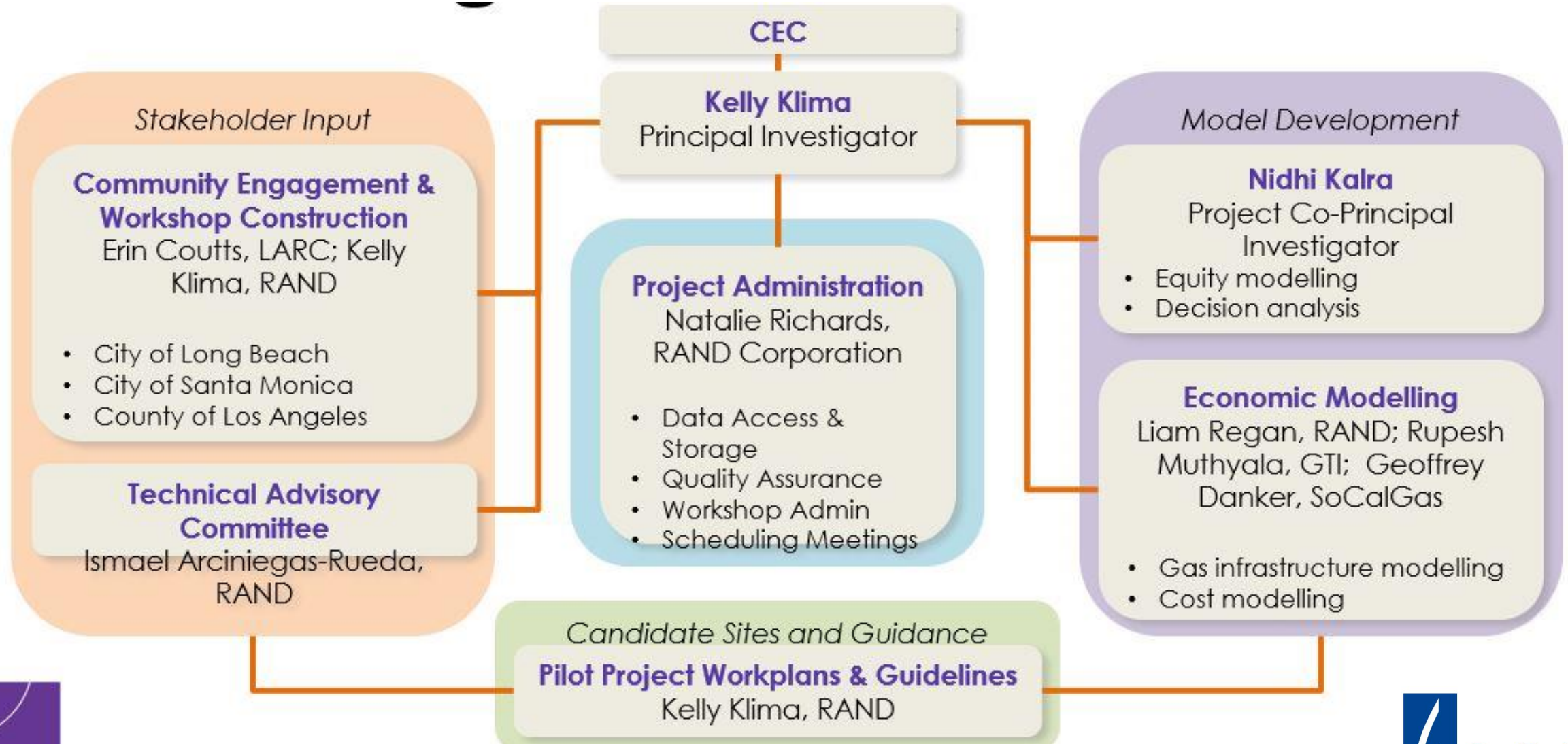
- The goal of the hydraulic modeling is to evaluate the operational consequences of altering gas flow on select pipelines of a local distribution network. The team will:
  - Configure a high-res model to help understand the consequences of altering gas flow to select portions of the network
  - Develop, configure, and/or utilize a gas hydraulic model of sufficient resolution fidelity to provide useful information on the cost of decommissioning selected lines and their contribution to the cost evaluation of electrification
  - Develop Geo-coded database populated with impacts of decommissioning of lines
  - Develop a robust decision support framework that includes evaluation of altering gas flow on local distribution network, decommissioning costs of selected lines and equity modeling.

# Strategic Pathways and Analytics for Tactical Decommissioning of Portions of Natural Gas Infrastructure in Southern California | Cost Modeling

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- The SoCalGas/GTI team will evaluate the various decommissioning costs associated with isolating parts of an integrated gas delivery network. Specifically, the team will:
  - Analyze the necessary information such as cost to interrupt existing gas networks, amount of gas no longer consumed, number and types of buildings that no longer receive the gas, age and code of construction of homes and buildings impacted by no gas supply, cost estimates of bring them up to the current code, and any additional costs to neighboring areas to analyze the total costs associated with decommissioning gas infrastructure.
  - Develop a Geo-coded database that will summarize the true costs associated with decommissioning of gas infrastructure and categorize the investment opportunities to help classify lines for potential electrification candidates.
  
- We will model ratepayer impacts within the communities of interest the effects of certain levels of decommissioning. The goal of this is to evaluate the decommissioning costs to the broader rate payers associated with isolating parts of an integrated gas delivery network and developing various decommissioning strategies. The team will:
  - Identify an existing utility model for natural gas rate payers.
  - Aggregate and anonymize the model such that it can be used to model the impact of certain decommissioning actions on natural gas rate payers.
  - Model within the communities of interest the effects of certain levels of decommissioning on ratepayers.
  - Prepare a *Rater Payer Impacts Memorandum* that will describe the impact of certain decommissioning actions on natural gas rate payers

# Strategic Pathways and Analytics for Tactical Decommissioning of Portions of Natural Gas Infrastructure in Southern California | Team



# Strategic Pathways and Analytics for Tactical Decommissioning of Portions of Natural Gas Infrastructure in Southern California | Team

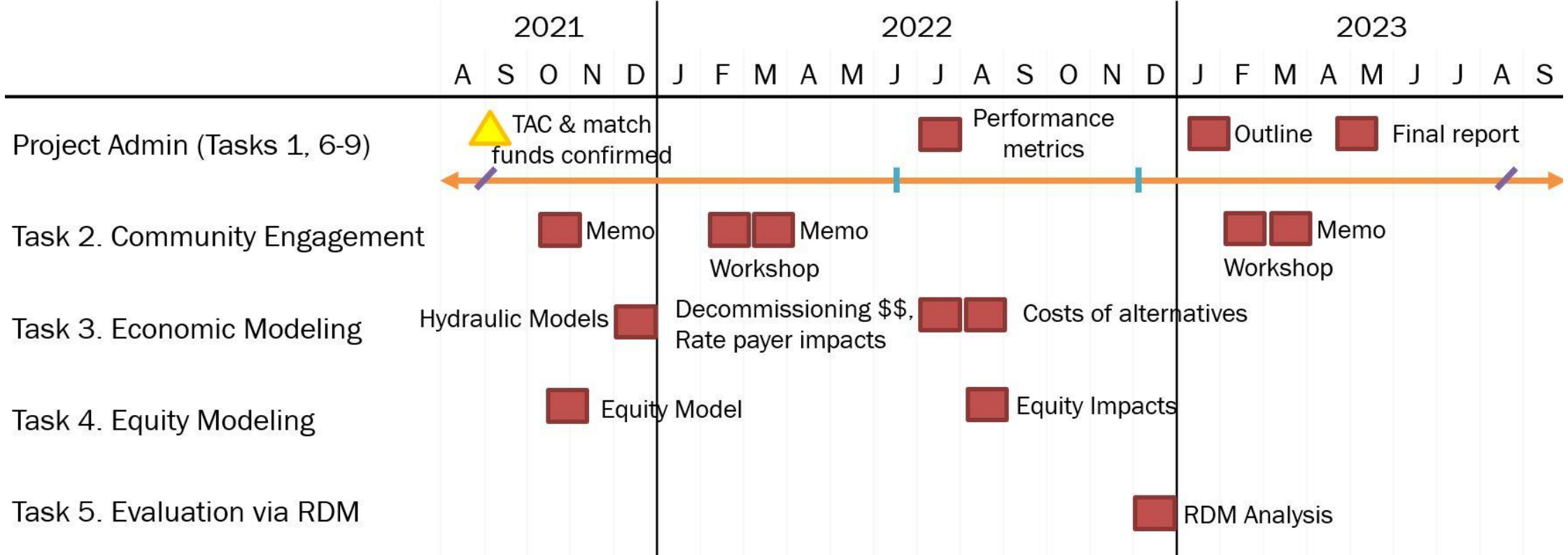
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- Project Management: Geoff Danker and Kati Hanley (Public Policy) and Alan Leung (Research and Development)
- Technical Support: Gas Technology Institute (GTI)
- Subject Matter Experts:
  - Gas Engineering
  - Strategic Planning
  - Gas Transmission
  - Gas Distribution
  - Rates and Demand Analysis
  - Integrity Management / Gas System Integrity
  - Regulatory
  - Customer Service Analytics
  - GIS






# Strategic Pathways and Analytics for Tactical Decommissioning of Portions of Natural Gas Infrastructure in Southern California | Timeline

## Deliverable Schedule



 Major deliverables
  Complete
  In Process
  To be started

Meetings
  Monthly, with CEC (2) TAC and (2) CPR
 
 Kickoff or Final