



# California Energy Model

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**Goal:** Develop an economic model of the California electrical system to determine the market penetration requirements of alternative energy sources.

## Introduction

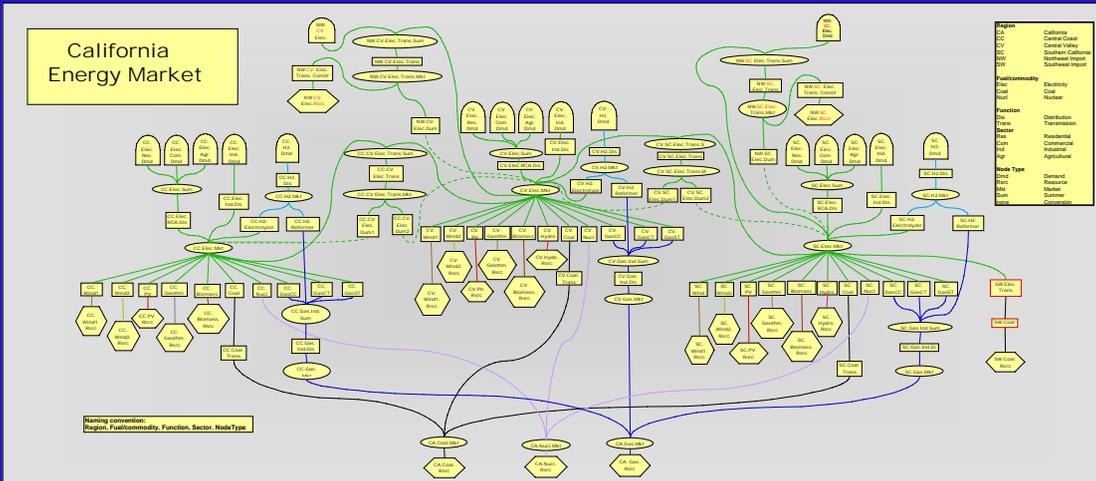
California's electricity comes from many different sources and the economic equilibrium of this market depends on the proper alignment of the various factors of each source. Successful development of upcoming energy technologies greatly rely on the knowledge of what makes an economy run to determine if a technology will fit into the market.

## Methods

Data on energy resource pricing, consumer demand elasticity, generation efficiency, resource availability and legislative constraints are gathered and used as input for the Market Equilibrium and Technology Assessment Network Modeling System (META-Net). META-Net is then used to bring this economic system into equilibrium and to establish market prices as well as resource allocation.

## Conclusion

This study is at the beginning of its 3 year projected timeline. Currently, META-Net output data is being analyzed and input data is being modified to create a model that accurately resembles the actual California electrical economy.



California Energy Market (left) shows all components and links taken into consideration during the modeling phase. Southern California Electrical Supply (bottom left), Central Valley Electrical Supply (bottom center), and Central Coast Electrical Supply (bottom right) all show coal to be the primary source of electricity. It should be noted that coal is NOT actually the primary energy source in these regions because of negative environmental affects it is believed to have. However, monetary costs outweigh environmental costs in this phase of analysis and coal is favored because it is less expensive.

