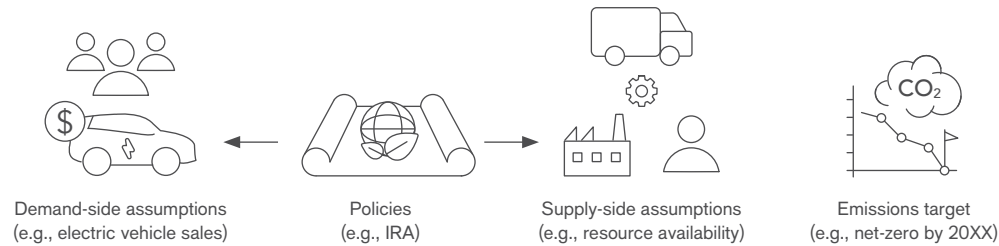


# Evolved Energy Research Deep Decarbonization Pathways Modeling

Deep decarbonization energy pathways modeling calculates the energy needed to power an economy while meeting a greenhouse gas emissions and other clean energy policies, and the least-cost way to provide that energy with efficiency, clean electricity, electrification, clean fuels, and carbon sequestration.

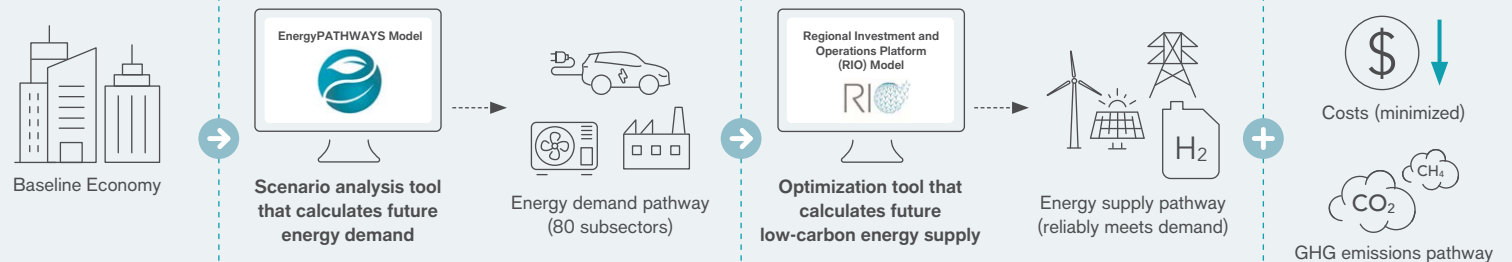
## Scenario Assumptions

Model incorporates assumptions about demand-side uses, clean energy policies and incentives, and supply-side resources.



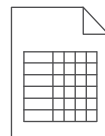
## Energy Modeling

Evolved Energy Research uses two models to calculate the least-cost way to provide energy under an emission target: Energy Pathways for demand and RIO for supply.



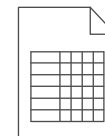
## Best Available Data

Model incorporates relevant and up-to-date energy data from reputable sources, substituted with local data where possible.



### Underlying demand data

- Economic subsectors
- Demand technology characteristics
- Capital, operating, and installation costs
- Hourly demand shapes
- Current technology stocks
- Energy service demands
- Fuels efficiencies (electricity, pipeline gas, diesel, etc.)
- Demand drivers (e.g., population)
- Geographies



### Underlying supply data

- Existing energy infrastructure
- Existing infrastructure scheduled retirement
- Scheduled resource additions already committed
- Energy production and conversion infrastructure characteristics
- Energy transport, storage, and delivery options
- Capital, operating and maintenance, and installation costs
- Resource potentials
- Renewable resource production shapes
- Commodity costs and delivery costs
- Gas global warming potentials
- Land use
- Geographies



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