HyPRO Model

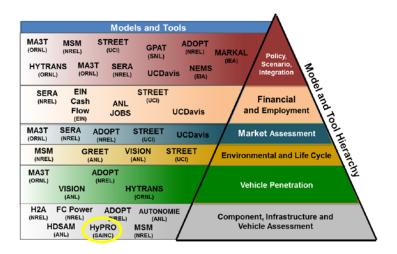
(Strategic Analysis, Inc.)

Objectives

Provide a modeling tool to develop an understanding of how the hydrogen production infrastructure might evolve in the United States and determine the factors that will drive infrastructure development.

Key Attributes & Strengths

HyPRO provides a transparent enumeration of production, delivery and dispensing costs for comparison of different options. It also provides a graphical projection of production, delivery and dispensing infrastructure build-out options.



Platform, Requirements & Availability

HyPRO is a static model based on Microsoft Excel and MatLab platforms, and links sub-modules of production, delivery, and dispensing components. The model will be available to the public through the Systems Analysis website (for downloading), but users must have Matlab for computing purposes.

INPUTS

- User inputs a hydrogen demand curve.
- Data from U.S. EIA's Annual Energy Outlook projections and the Hydrogen Analysis Resource Center (//hydrogen.pnl.gov/cocoon/morf/hydrogen).
- Technology information and attributes from the H2A Production and HDSAM models.

ASSUMPTIONS & DATA

- Real city, urban, and other regional data from census information database.
- Production and HDSAM models.
- Cost of energy data from the U.S. EIA.
- External resource supply/demand information and vehicle penetration data.

OUTPUTS

- Provides infrastructure investment costs by year, based on yearly variable plant utilization, and also identifies stranded assets.
- Provides a numeric tabulation of the projected hydrogen cost for each infrastructure pathway.