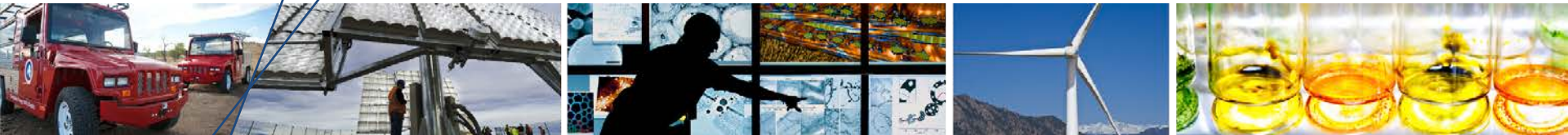


Hydrogen Financial Analysis Scenario Tool (H2FAST)



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HTAC Meeting – April 21-22, 2015
Arlington, Virginia

Overview

- **Hydrogen Financial Analysis Simulation Tool (H2FAST)**
- H2FAST is a standard financial accounting framework applied to the DOE's H2A cost analysis models
- There are three ways H2FAST has been implemented:

H2FAST: Web

H2FAST Web

H2FAST: Excel

H2FAST Excel

- The Excel spreadsheet is downloaded from the website, and provides more detailed inputs and capabilities for a more advanced end-user

H2FAST: BCS (Business Case Scenario tool)

BCS Vis

- Full supply chain results are currently being used internally by the H2USA IFWG for scenario exploration (using SERA model outputs)
- This presentation shows one **visualization** option for BCS

Goals and Audience for H2FAST

Goals

- Inform investment decisions by providing end-users an industry-grade tool to explore the financial aspects of the following:
 - One hydrogen station or multiple hydrogen stations
 - Broader hydrogen infrastructure network developments



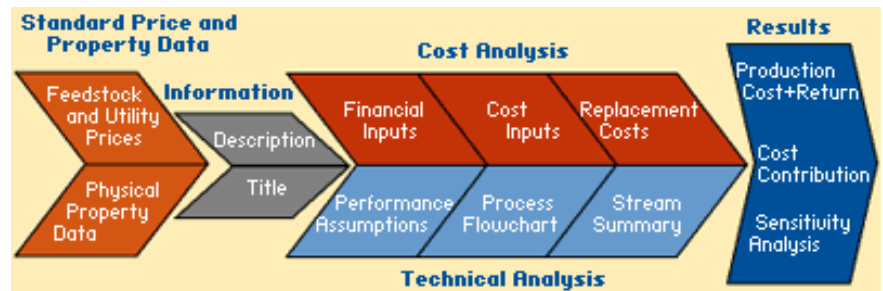
Audience

- Financial analysts at firms engaging in hydrogen projects
- Government agencies considering support for hydrogen stations (Governor's offices, state energy offices, municipalities, etc.)
- Stakeholders partnering on projects with multiple parties

What does H2FAST do? How does it work?

H2FAST provides a quick and convenient in-depth financial analysis for hydrogen stations

- H2FAST builds upon the DOE H2A discounted cash flow framework, with more extensive post-processing to report on a range of financial performance metrics of interest to investors.
- H2FAST calculations conform to generally accepted accounting practices (GAAP) and use either default values or user inputs.



H2A Discounted Cash Flow Framework

A business sector end-user will have less time to access relevant financial information than a typical H2A model end-user

What types of questions can H2FAST help to answer?



- **H2FAST: Web**

- How will a \$1 million capital incentive change the outlook for our station project?
- What if we gain \$10,000 per year (~\$30/day) in additional convenience store sales due to hydrogen customers?

- **H2FAST: Excel**

- What if our demand ramp-up rate is sluggish the first couple years, but then increases rapidly in the 4th year?
- What if we put \$5 million into a project with 7 stations?

- **H2FAST: BCS-Vis**

- What kind of investments and incentives would be needed for a network of stations covering an entire metropolitan area or region?
- How can we prioritize investments in one region or city compared to another?

H2FAST WEB

H2FAST Web

H2FAST Screenshot

H2FAST

The Hydrogen Fueling Financial Analysis Scenario Tool, H2FAST, provides a quick and convenient in-depth financial analysis for hydrogen fueling stations. H2FAST is available in two formats: an interactive online tool and a downloadable Excel spreadsheet.

The H2FAST spreadsheet offers basic and advanced user interface modes for modeling individual stations or groups of up to 10 stations. It provides users with detailed annual finance projections in the form of income statements, cash flow statements, and balance sheets; graphical presentation of financial performance parameters for 65 common metrics; life-cycle cost breakdown for each analysis scenario; and common ratio analysis results such as debt/equity position, return on equity, and debt service coverage ratio. Download the [H2FAST spreadsheet](#).

Use the H2FAST online tool to explore how some basic financial performance metrics change by varying up to 20 user inputs. Enter your own input values or adjust the slider bars to see how the results change.

The screenshot displays the H2FAST web interface. On the left, there are input sections for 'Station Inputs', 'Scenario Inputs', and 'Financing Inputs'. Each section contains various parameters with numerical input fields and slider bars. At the bottom of the input section is a 'Reset Inputs' button. On the right, there are two line graphs: 'Investor Net Cash Flow [\$ / year]' and 'Investor Cumulative Cash Flow [\$]'. Below the graphs are several key financial metrics: Internal Rate of Return [% / year], Break-Even Hydrogen Price [\$ / kg H₂], Investor Payback Period [years], NPV, and First Year Positive EBITD.

Metric	Value
Internal Rate of Return [% / year]	80.0
Break-Even Hydrogen Price [\$ / kg H ₂]	\$7.60
Investor Payback Period [years]	3
NPV	\$663,286
First Year Positive EBITD	2017

Introductory Language

Inputs

Download full financials for case
Reset Inputs

Links to Download Spreadsheet Version

Embed widget

Change Graphical Output metrics

Graphical Outputs (1)

Graphical Outputs (2)

Single Value Results

H2FAST Website: www.nrel.gov/hydrogen/h2fast/

List of H2FAST Web Inputs

Many other inputs and outputs are possible. This set of inputs and outputs has been reviewed by the H2USA IFWG and other reviewers.

Station Inputs

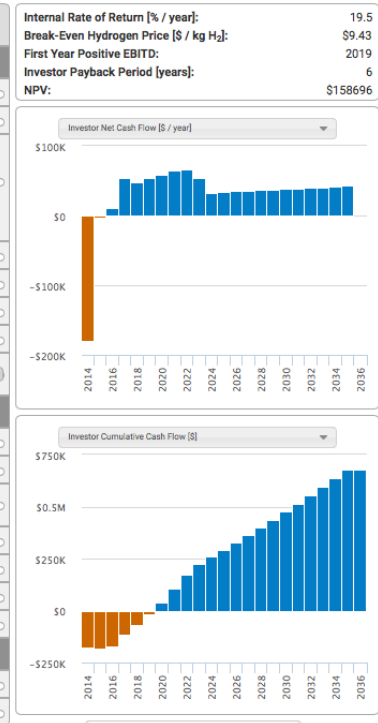
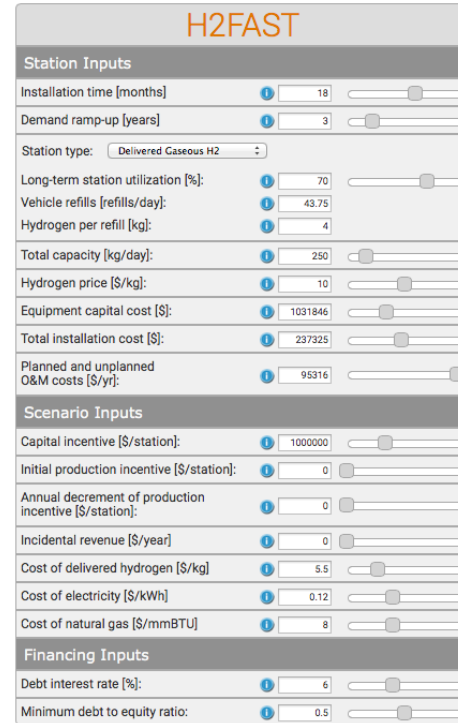
- Utilization (%) or Vehicles Refills (per day)
- Hydrogen per Refill (kg)
- Hydrogen Price (\$/kg)
- Total Capacity (kg/day)
- Total Capital Cost (\$)
- Total Installation Cost (\$)
- O&M Cost (\$/yr)

Financing Inputs

- Debt Interest Rate (%)
- Min Debt/Equity Ratio

Scenario Inputs

- Capital Incentive (\$/stn)
- Initial Production Incentive (\$/stn)
- Annual Decrement of Production Incentive (\$/stn)
- Incidental Revenue (\$/yr)
- Cost of Delivered Hydrogen (\$/kg)
- Cost of Electricity (\$/kWh)



- Inputs values can be changed with cell entries or sliders
- Graphed results update automatically at right

Example Case A: \$1.2 M station, no subsidy, \$14/kg price at the pump

**15% IRR,
8 yr investor payback**

- A nominal gaseous tank truck delivery station: 250 kg/day
- \$1.2 million in capital and installation
- Hydrogen delivered for \$5.50/kg and sold for \$14/kg
- Top graph shows net investor cash flow; Bottom graph shows cumulative
- Result: \$12.4/kg as breakeven price for a 10% IRR

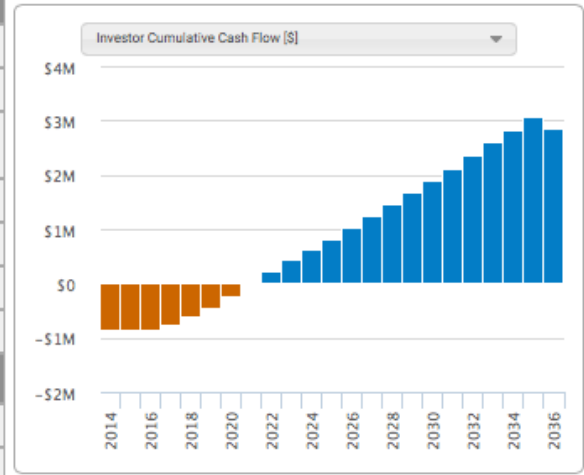
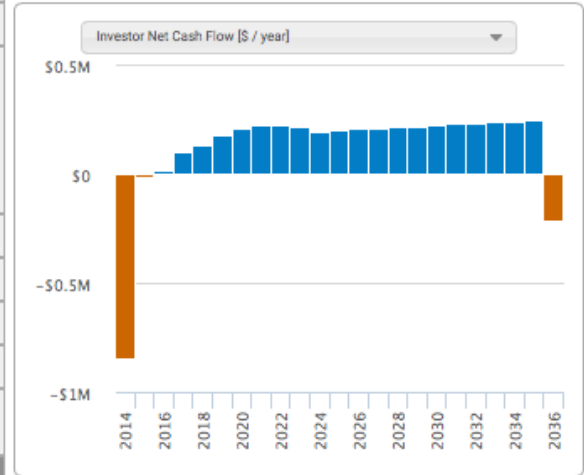
H2FAST

Station Inputs	
Installation time [months]	18
Demand ramp-up [years]	3
Station type:	Delivered Gaseous H2
Long-term station utilization [%]:	70
Vehicle refills [refills/day]:	43.75
Hydrogen per refill [kg]:	4
Total capacity [kg/day]:	250
Hydrogen price [\$ / kg]:	14
Equipment capital cost [\$]:	1031846
Total installation cost [\$]:	237325
Planned and unplanned O&M costs [\$ / yr]:	95316
Scenario Inputs	
Capital incentive [\$ / station]:	0
Initial production incentive [\$ / station]:	0
Annual decrement of production incentive [\$ / station]:	0
Incidental revenue [\$ / year]	0
Cost of delivered hydrogen [\$ / kg]	5.5
Cost of electricity [\$ / kWh]	0.12
Cost of natural gas [\$ / mmBTU]	8
Financing Inputs	
Debt interest rate [%]:	6
Minimum debt to equity ratio:	0.5

\$14/kg
\$1.2M

\$5.5/kg

Internal Rate of Return [% / year]:	15.1
Break-Even Hydrogen Price [\$ / kg H ₂):	\$12.37
First Year Positive EBITD:	2017
Investor Payback Period [years]:	8
NPV:	\$450256



Example Case B: Assume a \$1.0 M Capital Incentive and \$10/kg price

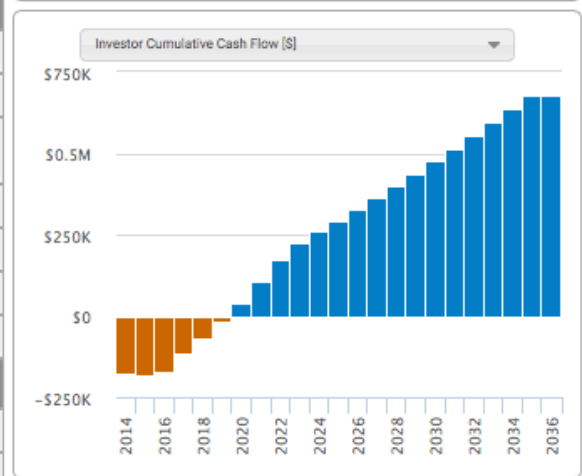
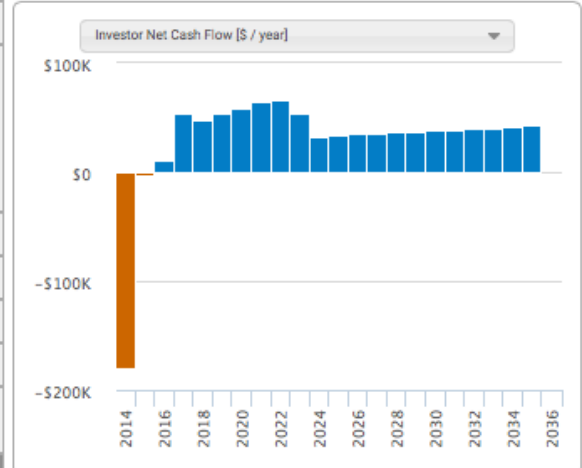
- Assume \$1 M capital incentive in the first year
- Change pump price to \$10 per kg
- Increase in IRR and investor payback period
- Result: \$9.4/kg as breakeven price for a 10% IRR

H2FAST

Station Inputs	
Installation time [months]	18
Demand ramp-up [years]	3
Station type:	Delivered Gaseous H2
Long-term station utilization [%]:	70
Vehicle refills [refills/day]:	43.75
Hydrogen per refill [kg]:	4
Total capacity [kg/day]:	250
Hydrogen price [\$ / kg]:	10
Equipment capital cost [\$]:	1031846
Total installation cost [\$]:	237325
Planned and unplanned O&M costs [\$ / yr]:	95316
Scenario Inputs	
Capital incentive [\$ / station]:	1000000
Initial production incentive [\$ / station]:	0
Annual decrement of production incentive [\$ / station]:	0
Incidental revenue [\$ / year]	0
Cost of delivered hydrogen [\$ / kg]	5.5
Cost of electricity [\$ / kWh]	0.12
Cost of natural gas [\$ / mmBTU]	8
Financing Inputs	
Debt interest rate [%]:	6
Minimum debt to equity ratio:	0.5

**19.5% IRR,
6 yr investor payback**

Internal Rate of Return [% / year]:	19.5
Break-Even Hydrogen Price [\$ / kg H ₂]:	\$9.43
First Year Positive EBITD:	2019
Investor Payback Period [years]:	6
NPV:	\$158696



Example Case C: \$1.0 M Incentive, \$10/kg price, \$10k incidental revenue

**22% IRR,
5 yr investor payback**

- \$1 M capital incentive
- \$10 per kg price
- Add an incidental revenue stream of \$10k per year (~\$30/day)
- Increase in IRR and investor payback period
- Result: \$9.2/kg as breakeven price for a 10% IRR

H2FAST

Station Inputs	
Installation time [months]	18
Demand ramp-up [years]	3
Station type:	Delivered Gaseous H2
Long-term station utilization [%]:	70
Vehicle refills [refills/day]:	43.75
Hydrogen per refill [kg]:	4
Total capacity [kg/day]:	250
Hydrogen price [\$ / kg]:	10
Equipment capital cost [\$]:	1031846
Total installation cost [\$]:	237325
Planned and unplanned O&M costs [\$ / yr]:	95316
Scenario Inputs	
Capital incentive [\$ / station]:	1000000
Initial production incentive [\$ / station]:	0
Annual decrement of production incentive [\$ / station]:	0
Incidental revenue [\$ / year]	10000
Cost of delivered hydrogen [\$ / kg]	5.5
Cost of electricity [\$ / kWh]	0.12
Cost of natural gas [\$ / mmBTU]	8
Financing Inputs	
Debt interest rate [%]:	6
Minimum debt to equity ratio:	0.5

\$10/kg

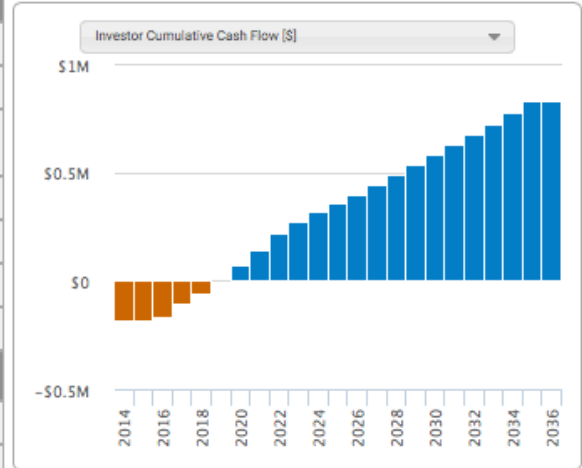
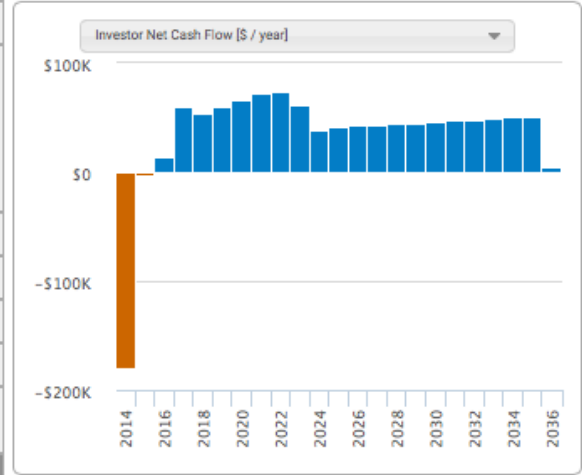
\$1.2M

\$1.0M

\$10k/yr

\$5.5/kg

Internal Rate of Return [% / year]: 21.9
 Break-Even Hydrogen Price [\$ / kg H₂]: \$9.24
 First Year Positive EBITD: 2019
 Investor Payback Period [years]: 5
 NPV: \$211520



H2FAST EXCEL

H2FAST Excel

H2FAST Spreadsheet: Summary of Capabilities

In general the spreadsheet version allows for greater control of inputs and more elaborate exploration of outputs, within a spreadsheet environment that may be more comfortable or preferable for some end-users.

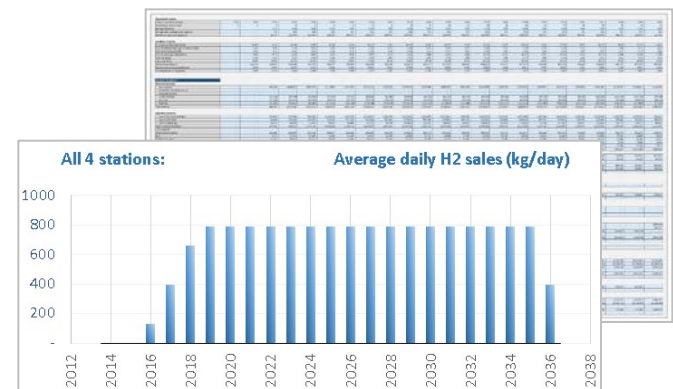
Inputs

- Ability to enter information for up to 10 stations, and assess finances for each individually or as a cluster of station projects.
- This allows for side-by-side comparison of station projects
- There are two modes for users to provide inputs:
 - Basic mode: 20 parameters
 - Advanced mode: 51 parameters
- Inputs and outputs have hover-over descriptions to orient users




Outputs


- Detailed report tables are provided for each project year
 - Scenario parameters (e.g. volumes of sales)
 - Income statement
 - Cash flow statement
 - Balance sheet
 - Select ratio analyses



H2FAST Excel Interface

H2FAST: Hydrogen Fueling Financial Analysis Scenario Tool 

Overall Financial Performance Metrics		Restore defaults
Leveraged, after-tax, nominal IRR		84.44%
Investor payback period		3 years
First year of positive EBITD		analysis year 3
After-tax, nominal NPV @ 10% discount	\$	696,724
Estimated break-even leveraged price (\$/kg)	\$	7.60



Station(s) Information	
Select interface type	Basic
Enter number of stations to model	1

Multi-Station Inputs	
Select station(s) to analyze	All Stations
Station being analyzed (yellow background)	1
Station type	Delivered gas
Total dispensing capacity (kg/day)	250
Equipment capital cost	\$ 1,182,165
Installation cost	\$ 295,541
Annual maintenance (\$/year)	\$ 36,056
One time capital incentives (grant or ITC)	\$ 1,400,000
Annual operating incentives (grant or PTC)	\$ -
Annual incidental revenue	\$ -

Demand Projection	
Price of hydrogen at project onset (\$/kg)	10.00
Installation time (months)	18
Demand ramp-up (years)	2
Long-term nominal utilization (%)	70%

Feedstock Information	
Cost of delivered hydrogen (\$/kg)	\$ 5.50
Price of electricity (\$/kWh)	\$ 0.120
Price of natural gas (\$/mmBTU)	\$ 8.00

Other operating expenses	
Equipment life (years)	20
Total tax rate (state, federal, local)	38.50%
Debt/equity financing	0.5
Debt type	Revolving debt
If loan, period of loan (years)	20
Debt interest rate (compounded monthly)	6.00%

Real levelized values (\$/kg H ₂)	
Sales revenue	\$10.00
Capital incentive	\$1.18
Incidental revenue	\$0.00
Production incentives	\$0.00
Delivered hydrogen	\$5.50
Cost of electricity	\$1.20
Equipment cost	\$0.99
Maintenance expense	\$0.59
Road tax	\$0.36
Taxes payable	\$0.28
Credit card fees	\$0.25
Installation expenditure	\$0.25
Sales tax	\$0.23
Property insurance	\$0.09
Selling & administrative	\$0.05
Rent	\$0.05
Interest expense	\$0.02
Licensing & permitting	\$0.02
Labor expense	\$0.00
Cost of natural gas	\$0.00

Basic Interface

- Basic user inputs
- Advanced user inputs
- Calculated values
- Key results

- Detailed graphical display
- Station costs specifications
- Revenues, cost breakdown
- Financial specifications
- General outputs
- Graphical display selector
- Mode & stations toggles

H2FAST: BUSINESS CASE SCENARIO TOOL (BCS)

BCS Vis

Visualizing SERA Scenario Results

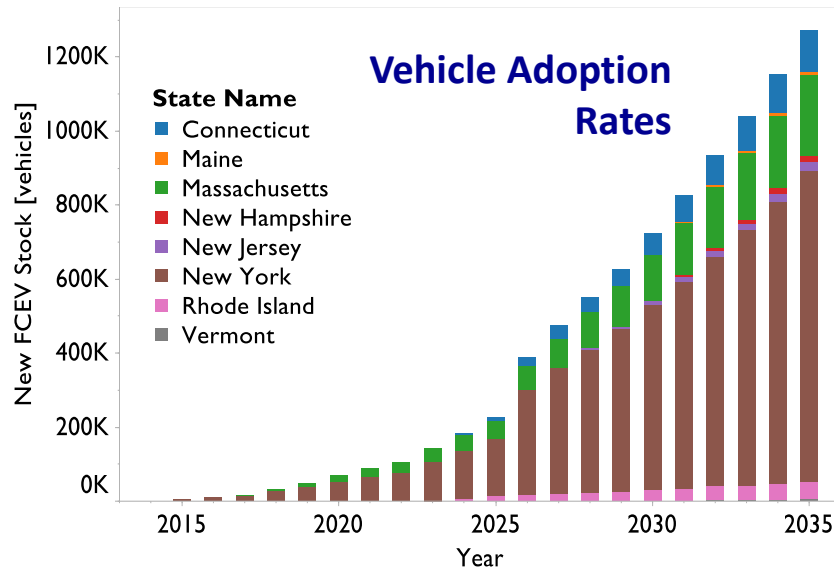
The H2FAST framework can be applied across the entire hydrogen system to explore multiple market growth scenarios

- The SERA model can generate a large volume of scenario results
- For some engaged audiences, such as H2USA Working Group members, there is interest in exploring multiple sets of scenario outputs
- The SERA Visualization tool (BCS-Vis) is being developed for this type of audience

Demand and Delivery by City



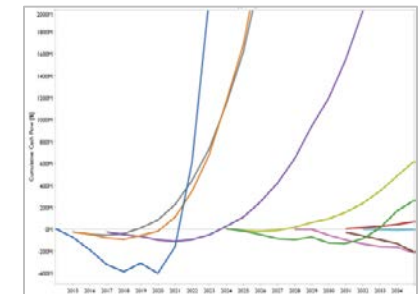
Regional/State-level Subsets of Results



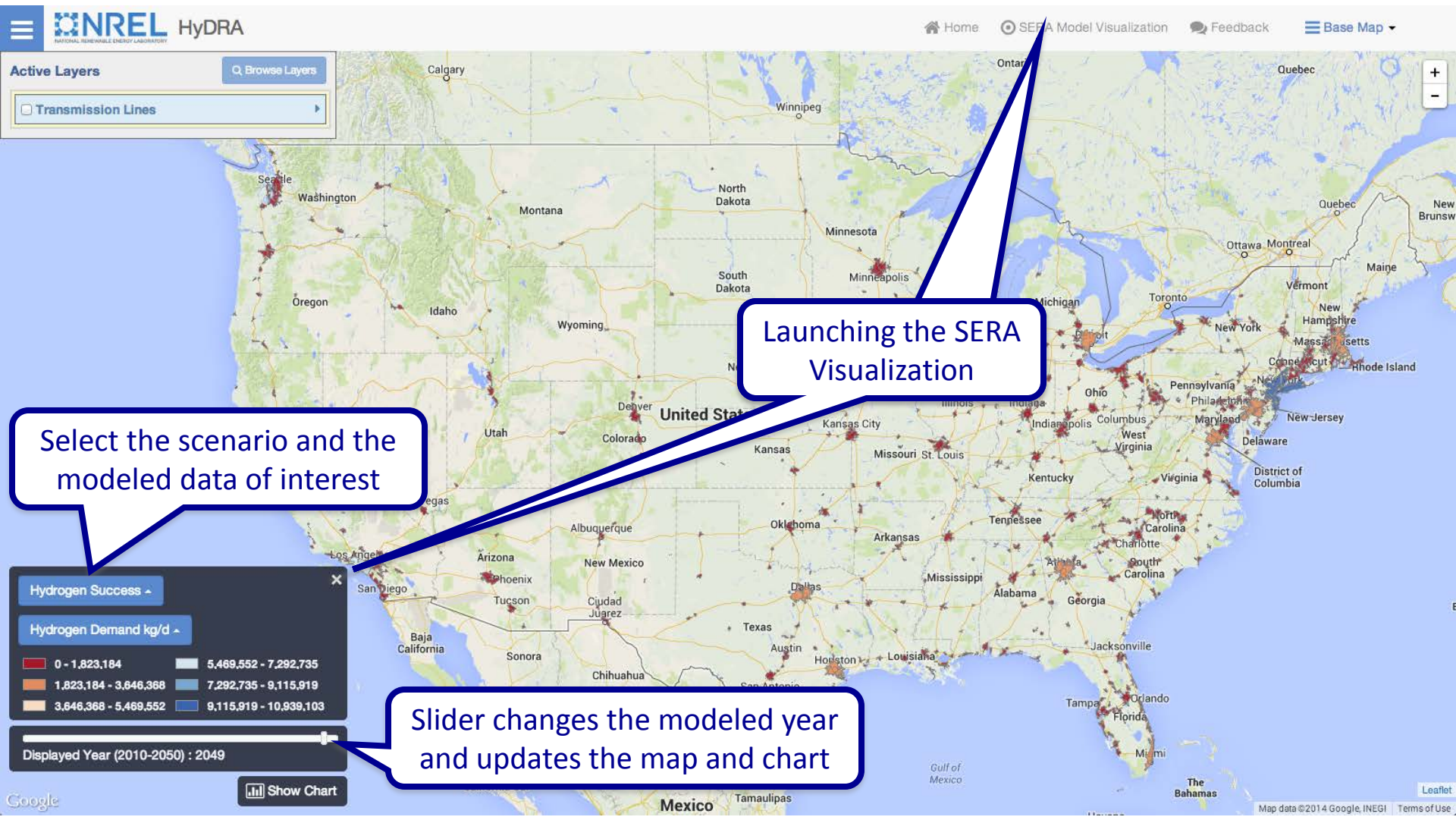
Station Placement



Cash Flows



SERA Visualization (Beta)



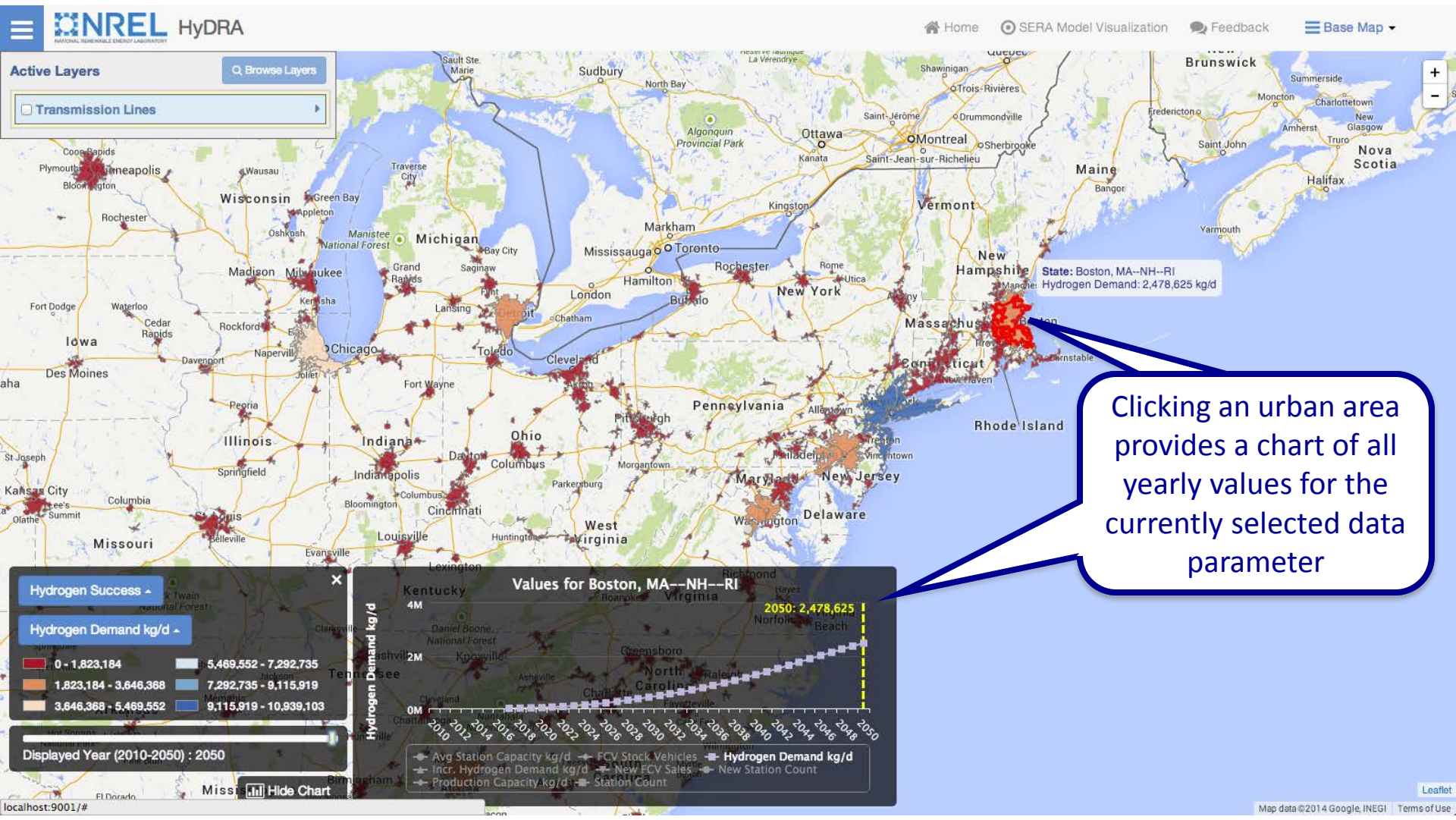
Select the scenario and the modeled data of interest

Launching the SERA Visualization

Slider changes the modeled year and updates the map and chart

This 4-min video demonstrates this visualization tool: <http://youtu.be/J7y51c-dldo>

SERA Visualization (Beta)



This 4-min video demonstrates this visualization tool: <http://youtu.be/J7y51c-dldo>

Summary

- The H2FAST *Web* and *Spreadsheet* tools are an effective means of informing investment decisions on hydrogen station projects
 - Developed for end-users requiring a simple, first-cut analysis (*web version*) as well as more detailed and elaborate analyses (*spreadsheet version*)
- The H2FAST framework can also be applied to the entire hydrogen fuel supply chain to evaluate the financial implications of infrastructure development at the city, region, or national levels
 - This framework is currently being used internally to inform H2USA IFWG members in scenario exploration
 - A beta version of a visualization tool has been developed to allow access to these multivariate results to a broader audience

QUESTIONS?

BACKUP SLIDES

Example Toggles

H2FAST: Hydrogen Fueling Financial Analysis Scenario Tool NREL

Overall Financial Performance Metrics Restore defaults

Leverage ₀ , after tax, nominal IRR	94.46%
Investor payback period	3 years
First year of positive EBITD	analysis year 3
After tax, nominal NPV @ 10% discount	\$ 696,724
Estimated break-even leveraged price (\$/kg)	7.00
Cumulative investor cash flow	
Investor contribution + previous year investor contribution	

All 1 stations: Cumulative investor cash flow, (Millions)

Station(s) Information

Select interface type: Basic

Enter number of stations to model: 1

Total dispensing capacity (kg/day)	250
Equipment capital cost	\$ 1,182,165
Installation cost	\$ 295,541
Annual maintenance (\$/year)	36,056

Incentives information

One time capital incentives (grant or ITC)	\$ 1,400,000
Annual operating incentives (grant or PTC)	\$ -
Incidental revenue	\$ -

Demand Projection

Price of hydrogen at project onset (\$/kg)	10.00
Installation time (months)	18
Demand ramp-up (years)	2
Long-term nominal utilization (%)	70%

Feedstock Information

Cost of delivered hydrogen (\$/kg)	\$ 5.50
Price of electricity (\$/kWh)	\$ 0.120
Price of natural gas (\$/mmBtu)	\$ 8.00

Other operating expenses

Financing Information

Equipment life (years)	20
Total tax rate (state, federal, local)	38.50%
Debt/equity financing	0.5
Debt type	Revolving debt
If loans, period of loan (years)	
Debt interest rate (compounded monthly)	6.00%

Multi-Station Inputs

Select station(s) to analyze: All Stations

Station being analyzed (yellow background): 1

Station type: Delivered gas

Total dispensing capacity (kg/day)	250
Equipment capital cost	\$ 1,182,165
Installation cost	\$ 295,541
Annual maintenance (\$/year)	36,056

One time capital incentives (grant or ITC)	\$ 1,400,000
Annual operating incentives (grant or PTC)	\$ -
Annual incidental revenue	\$ -

Real levelized values (\$/kg H₂)

Sales revenue	\$10.00
Capital incentive	\$1.18
Incidental revenue	\$0.00
Production incentives	\$0.00
Delivered hydrogen	\$5.50
Cost of electricity	\$1.20
Equipment cost	\$0.99
Maintenance expense	\$0.39
Road tax	\$0.36
Taxes payable	\$0.28
Credit card fees	\$0.25
Installation expenditure	\$0.25
Sales tax	\$0.23
Property insurance	\$0.09
Selling & administrative	\$0.05
Rent	\$0.05
Interest expense	\$0.02
Licensing & permitting	\$0.02
Labor expense	\$0.00
Cost of natural gas	\$0.00

Basic Interface
1 station
station 1 analysis

Example Toggles

H2FAST: Hydrogen Fueling Financial Analysis Scenario Tool



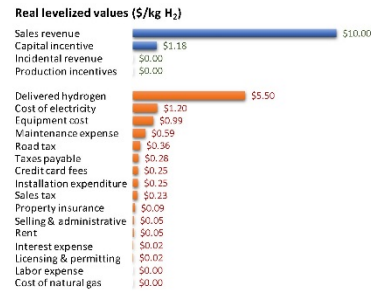
Overall Financial Performance Metrics		Restore defaults
Leverage, after tax, nominal IRR	54.44%	
Investor payback period	3 years	
First year of positive EBITD	analysis year 3	
After tax, nominal NPV @ 10% discount	\$ 696,724	
Estimated break-even leveraged price (\$/kg)	\$ 7.80	
Cumulative investor cash flow		Labels
Investor contribution + previous year investor contribution		



Station(s) Information	
Select interface type	Advanced
Enter number of stations to model	1
Total dispensing capacity (kg/day)	250
Equipment capital cost	\$ 1,182,165
Installation cost	\$ 295,541
Annual maintenance (\$/year)	\$ 36,056
Maintenance escalation (% annually)	1.9%
Incentives Information	
One-time capital incentives (grant or ITC)	\$ 1,400,000
Annual operating incentives (grant or PTC)	\$ -
Operating incentives decay rate (%/year)	10%
Operating incentives sunset (years)	10
Incidental revenue	\$ -
Incidental revenue escalation rate (%/year)	1.9%

Multi-Station Inputs	
Select station(s) to analyze	All Stations
Station being analyzed (yellow background)	1
Station type	Delivered gas
Total dispensing capacity (kg/day)	250
Equipment capital cost	\$ 1,182,165
Installation cost	\$ 295,541
Annual maintenance (\$/year)	\$ 36,056
One-time capital incentives (grant or ITC)	\$ 1,400,000
Annual operating incentives (grant or PTC)	\$ -
Annual incidental revenue	\$ -

Demand Projection	
Price of hydrogen at project onset (\$/kg)	10.00
Project start year	2015
Price escalation rate (% annually)	3.93%
Installation time (months)	18
Demand ramp-up (years)	2
Long-term nominal utilization (%)	70%
Feedstock Information	
Cost of delivered hydrogen (\$/kg)	\$ 5.50
Escalation rate of hydrogen cost (% annually)	1.9%
Price of electricity (\$/kWh)	\$ 0.120
Escalation rate of electricity cost (% annually)	1.9%
Price of natural gas (\$/mmBTU)	\$ 8.00
Escalation rate of natural gas cost (% annually)	1.9%




Other operating expenses	
Credit card fees (% of sales)	2.50%
Sales tax (% of sales)	2.25%
Road tax (\$/kg)	\$ 0.36
Road tax escalation rate (%/year)	1.90%
Staffing labor hours (by year-station)	-
Labor rate (\$/h)	\$ 40
Labor escalation rate (% annually)	1.9%
Licensing & permitting (\$/year-station)	\$ 1,000
Licensing & permitting escalation rate (%/year)	1.9%
Rent of land (\$/station-year)	\$ 3,000
Rent escalation (% annually)	1.9%
Property insurance (% of dep.capital)	1.5%
Selling & administrative expense (% of sales)	0.5%

Financing Information	
Equipment life (years)	20
Total tax rate (state, federal, local)	38.50%
Is installation cost depreciable?	No
Are operating incentives taxable?	No
Is capital incentive depreciable?	Yes
Are tax losses monetized (tax equity application)	Yes
Allowable tax loss carry-forward	7 years
General inflation rate	3.90%
Depreciation (MACRS)	7 year
Leveraged after-tax nominal discount rate	10.0%
Debt/Equity financing	0.5
Debt type	Revolving debt
If loan, period of loan (years)	1
Debt interest rate (compounded monthly)	6.00%
Cash on hand (% of monthly expenses)	100%

Advanced Interface
1 station
station 1 analysis

Example Toggles

H2FAST: Hydrogen Fueling Financial Analysis Scenario Tool 

Overall Financial Performance Metrics Restore defaults

Leverage ₀ , after tax, nominal IRR	94.46%
Investor payback period	3 years
First year of positive EBITD	analysis year 3
After tax, nominal NPV @ 10% discount	\$ 696,724
Estimated break-even leveraged price (\$/kg)	7.00
Cumulative investor cash flow	
Investor contribution + previous year investor contribution	

Station(s) Information

Select interface type: Basic

Enter number of stations to model: 1

Total dispensing capacity (kg/day)	250
Equipment capital cost	\$ 1,182,165
Installation cost	\$ 295,541
Annual maintenance (\$/year)	\$ 36,056

Incentives Information

One time capital incentives (grant or ITC)	\$ 1,400,000
Annual operating incentives (grant or PTC)	\$ -
Incidental revenue	\$ -

Demand Projection

Price of hydrogen at project onset (\$/kg)	10.00
Installation time (months)	18
Demand ramp-up (years)	2
Long-term nominal utilization (%)	70%

Feedstock Information

Cost of delivered hydrogen (\$/kg)	\$ 5.50
Price of electricity (\$/kWh)	\$ 0.120
Price of natural gas (\$/mmBtu)	\$ 8.00

Other operating expenses

Financing Information

Equipment life (years)	20
Total tax rate (state, federal, local)	38.50%
Debt/equity financing	0.5
Debt type	Revolving debt
If loan, period of loan (years)	
Debt interest rate (compounded monthly)	6.00%

All 1 stations: Cumulative investor cash flow, (Millions)

Multi-Station Inputs

Select station(s) to analyze: All Stations

Station being analyzed (yellow background): 1

Station type: Delivered gas

Total dispensing capacity (kg/day)	250
Equipment capital cost	\$ 1,182,165
Installation cost	\$ 295,541
Annual maintenance (\$/year)	\$ 36,056

One time capital incentives (grant or ITC)	\$ 1,400,000
Annual operating incentives (grant or PTC)	\$ -
Annual incidental revenue	\$ -

Real levelized values (\$/kg H₂)

Sales revenue	\$10.00
Capital incentive	\$1.18
Incidental revenue	\$0.00
Production incentives	\$0.00
Delivered hydrogen	\$5.50
Cost of electricity	\$1.20
Equipment cost	\$0.99
Maintenance expense	\$0.39
Road tax	\$0.36
Taxes payable	\$0.28
Credit card fees	\$0.25
Installation expenditure	\$0.25
Sales tax	\$0.23
Property insurance	\$0.09
Selling & administrative	\$0.05
Rent	\$0.05
Interest expense	\$0.02
Licensing & permitting	\$0.02
Labor expense	\$0.00
Cost of natural gas	\$0.00

Basic Interface
1 station
station 1 analysis

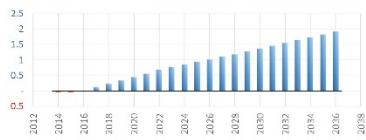
Example Toggles

H2FAST: Hydrogen Fueling Financial Analysis Scenario Tool



Overall Financial Performance Metrics		Restore defaults
Leverage, after tax, nominal IRR	96.44%	
Investor payback period	3 years	
First year of positive EBITD	analysis year 3	
After tax, nominal NPV @ 10% discount	\$ 696,724	
Estimated break-even leveraged price (\$/kg)	\$ 7.60	
Cumulative investor cash flow		Labels
Investor contribution + previous year investor contribution		

Station 1: Cumulative investor cash flow, (Millions)



Station(s) Information	
Select interface type	Basic
Enter number of stations to model	?
Total dispensing capacity (kg/day)	250
Equipment capital cost	\$ 1,182,165
Installation cost	\$ 295,541
Annual maintenance (\$/year)	\$ 36,056
Incentives information	
One time capital incentives (grant or ITC)	\$ 1,400,000
Annual operating incentives (grant or PTC)	\$ -
Incidental revenue	\$ -
Demand Projection	
Price of hydrogen at project onset (\$/kg)	10.00
Installation time (months)	18
Demand ramp-up (years)	2
Long-term nominal utilization (%)	70%
Feedstock Information	
Cost of delivered hydrogen (\$/kg)	\$ 5.50
Price of electricity (\$/kWh)	\$ 0.120
Price of natural gas (\$/mmBTU)	\$ 8.00
Other operating expenses	
Financing Information	
Equipment life (years)	20
Total tax rate (state, federal, local)	38.50%
Debt/equity financing	0.5
Debt type	Revolving debt
If loan, period of loan (years)	
Debt interest rate (compounded monthly)	6.00%


Multi-Station Inputs	
Select station(s) to analyze	1
Station being analyzed (yellow background)	1
Station type	Delivered gas
Total dispensing capacity (kg/day)	250
Equipment capital cost	\$ 1,182,165
Installation cost	\$ 295,541
Annual maintenance (\$/year)	\$ 36,056
One time capital incentives (grant or ITC)	\$ 1,400,000
Annual operating incentives (grant or PTC)	\$ -
Annual incidental revenue	\$ -

Real levelized values (\$/kg H₂)



Basic Interface
2 stations
station 1 analysis

Example Toggles

H2FAST: Hydrogen Fueling Financial Analysis Scenario Tool 

Overall Financial Performance Metrics Restore defaults

Leverage, after tax, nominal IRR	84.44%
Investor payback period	3 years
First year of positive EBITD	analysis year 3
After tax, nominal NPV @ 10% discount	\$ 698,724
Estimated break-even leveraged price (\$/kg)	7.60
Cumulative investor cash flow	Labels
Investor contribution + previous year investor contribution	

Station(s) Information

Select interface type: Basic

Enter number of stations to model: 3

Total dispensing capacity (kg/day)	250
Equipment capital cost	1,182,165
Installation cost	295,541
Annual maintenance (\$/year)	36,056

Incentives Information

One time capital incentives (grant or ITC)	\$ 1,400,000
Annual operating incentives (grant or PTC)	\$ -
Incidental revenue	\$ -

Demand Projection

Price of hydrogen at project onset (\$/kg)	10.00
Installation time (months)	18
Demand ramp-up (years)	2
Long term nominal utilization (%)	70%

Feedstock Information

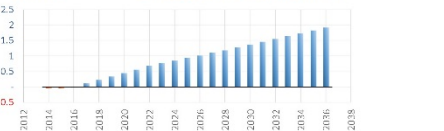
Cost of delivered hydrogen (\$/kg)	\$ 5.50
Price of electricity (\$/kWh)	\$ 0.120
Price of natural gas (\$/mmBtu)	\$ 8.00

Other operating expenses

Financing Information

Equipment life (years)	20
Total tax rate (state, federal, local)	38.50%
Debt/equity financing	0.5
Debt type	Revolving debt
IF loans, period of loan (years)	
Debt interest rate (compounded monthly)	6.00%

Station 1: Cumulative Investor cash flow, (Millions)



Multi-Station Inputs

Select station(s) to analyze: 1

Station being analyzed (yellow background): 1, 2, 3

Station type	Delivered gas	Delivered liquid	Electrolysis
Total dispensing capacity (kg/day)	250	900	130
Equipment capital cost	\$ 1,182,165	\$ 1,888,300	\$ 2,279,897
Installation cost	\$ 295,541	\$ 472,075	\$ 284,987
Annual maintenance (\$/year)	\$ 36,056	\$ 57,543	\$ 102,595

One time capital incentives (grant or ITC)	\$ 1,400,000	\$ 1,400,000	\$ 1,400,000
Annual operating incentives (grant or PTC)	\$ -	\$ -	\$ -
Annual incidental revenue	\$ -	\$ -	\$ -

Real levelized values (\$/kg H₂)

Sales revenue	\$10.00
Capital incentive	\$1.18
Incidental revenue	\$0.00
Production incentives	\$0.00
Delivered hydrogen	\$5.50
Cost of electricity	\$1.20
Equipment cost	\$0.89
Maintenance expense	\$0.59
Road tax	\$0.36
Taxes payable	\$0.28
Credit card fees	\$0.25
Installation expenditure	\$0.25
Sales tax	\$0.23
Property insurance	\$0.09
Selling & administrative	\$0.05
Rent	\$0.05
Interest expense	\$0.02
Licensing & permitting	\$0.02
Labor expense	\$0.00
Cost of natural gas	\$0.00

**Basic Interface
3 stations
station 1 analysis**

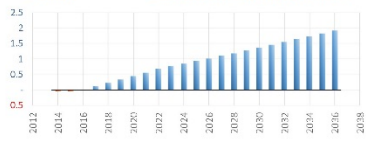
Example Toggles

H2FAST: Hydrogen Fueling Financial Analysis Scenario Tool



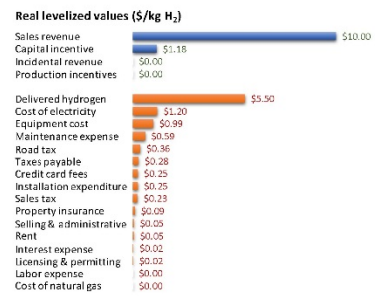
Overall Financial Performance Metrics		Restore defaults
Leverage, after tax, nominal IRR	94.44%	
Investor payback period	3 years	
First year of positive EBITD	analysis year 3	
After tax, nominal NPV @ 10% discount	\$ 696,724	
Estimated break-even leveraged price (\$/kg)	\$ 7.60	
Cumulative investor cash flow		Labels
Investor contribution + previous year investor contribution		

Station 1: Cumulative investor cash flow, (Millions)



Station(s) Information	
Select interface type	Basic
Enter number of stations to model	4
Total dispensing capacity (kg/day)	250
Equipment capital cost	\$ 1,182,165
Installation cost	\$ 295,541
Annual maintenance (\$/year)	\$ 36,056
Incentives information	
One time capital incentives (grant or ITC)	\$ 1,400,000
Annual operating incentives (grant or PTC)	\$ -
Incidental revenue	\$ -
Demand Projection	
Price of hydrogen at project onset (\$/kg)	10.00
Installation time (months)	18
Demand ramp-up (years)	2
Long-term nominal utilization (%)	70%
Feedstock Information	
Cost of delivered hydrogen (\$/kg)	\$ 5.50
Price of electricity (\$/kWh)	\$ 0.120
Price of natural gas (\$/mmBtu)	\$ 8.00
Other operating expenses	
Financing Information	
Equipment life (years)	20
Total tax rate (state, federal, local)	38.50%
Debt/equity financing	0.5
Debt type	Revolving debt
If loan, period of loan (years)	
Debt interest rate (compounded monthly)	6.00%

Multi-Station Inputs				
Select station(s) to analyze	1	2	3	4
Station being analyzed (yellow background)	1			
Station type	Delivered gas	Delivered liquid	Electrolysis	On-site SMR
Total dispensing capacity (kg/day)	250	500	130	250
Equipment capital cost	\$ 1,182,165	\$ 1,888,300	\$ 2,279,897	\$ 2,418,598
Installation cost	\$ 295,541	\$ 472,075	\$ 284,987	\$ 283,720
Annual maintenance (\$/year)	\$ 36,056	\$ 57,593	\$ 102,595	\$ 127,674
One time capital incentives (grant or ITC)	\$ 1,400,000	\$ 1,400,000	\$ 1,400,000	\$ 1,400,000
Annual operating incentives (grant or PTC)	\$ -	\$ -	\$ -	\$ -
Annual incidental revenue	\$ -	\$ -	\$ -	\$ -



Basic Interface
4 stations
station 1 analysis

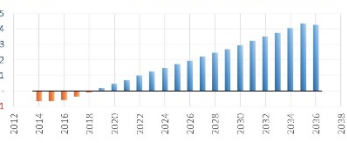
Example Toggles

H2FAST: Hydrogen Fueling Financial Analysis Scenario Tool



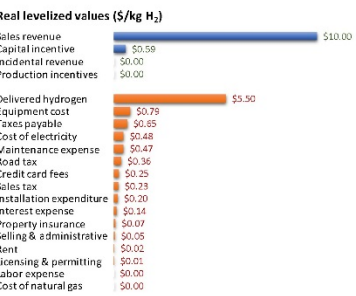
Overall Financial Performance Metrics		Restore defaults
Leverage, after tax, nominal IRR	26.15%	
Investor payback period	5 years	
First year of positive EBITD	analysis year 2	
After tax, nominal NPV @ 10% discount	\$ 1,178,231	
Estimated break-even leveraged price (\$/kg)	\$ 7.97	
Cumulative investor cash flow		Labels
Investor contribution + previous year investor contribution		

Station 2: Cumulative investor cash flow, (Millions)



Station(s) Information	
Select interface type	Basic
Enter number of stations to model	4
Total dispensing capacity (kg/day)	500
Equipment capital cost	1,888,300
Installation cost	472,075
Annual maintenance (\$/year)	57,593
Incentives information	
One time capital incentives (grant or ITC)	\$ 1,400,000
Annual operating incentives (grant or PTC)	\$ -
Incidental revenue	\$ -
Demand Projection	
Price of hydrogen at project onset (\$/kg)	10.00
Installation time (months)	18
Demand ramp-up (years)	2
Long-term nominal utilization (%)	70%
Feedstock information	
Cost of delivered hydrogen (\$/kg)	\$ 5.50
Price of electricity (\$/kWh)	\$ 0.120
Price of natural gas (\$/mmBtu)	\$ 8.00
Other operating expenses	
Financing information	
Equipment life (years)	20
Total tax rate (state, federal, local)	38.50%
Debt/equity financing	0.5
Debt type	Revolving debt
If loan, period of loan (years)	
Debt interest rate (compounded monthly)	6.00%

Multi-Station Inputs				
Select station(s) to analyze	2			
Station being analyzed (yellow background)	1	2	3	4
Station type	Delivered gas	Delivered liquid	Electrolysis	On-site SMR
Total dispensing capacity (kg/day)	250	500	130	250
Equipment capital cost	\$ 1,182,165	\$ 1,888,300	\$ 2,279,897	\$ 2,418,598
Installation cost	\$ 295,541	\$ 472,075	\$ 284,987	\$ 283,720
Annual maintenance (\$/year)	\$ 36,056	\$ 57,593	\$ 102,595	\$ 127,674
One time capital incentives (grant or ITC)	\$ 1,400,000	\$ 1,400,000	\$ 1,400,000	\$ 1,400,000
Annual operating incentives (grant or PTC)	\$ -	\$ -	\$ -	\$ -
Annual incidental revenue	\$ -	\$ -	\$ -	\$ -



**Basic Interface
4 stations
station 2 analysis**

Example Toggles

H2FAST: Hydrogen Fueling Financial Analysis Scenario Tool

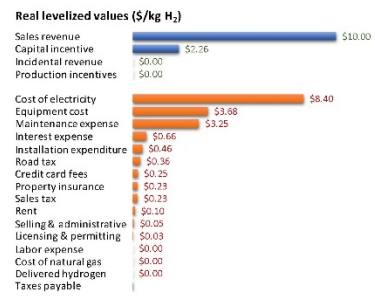


Overall Financial Performance Metrics		Restore defaults
Leverage, after tax, nominal IRR	Margin is too low	
Investor payback period	Margin is too low	
First year of positive EBITD	Margin is too low	
After tax, nominal NPV @ 10% discount	\$(92,596)	
Estimated break-even leveraged price (\$/kg)	\$ 15.96	
Cumulative investor cash flow		Labels
Investor contribution + previous year investor contribution		



Station(s) Information	
Select interface type	Basic
Enter number of stations to model	4
Total dispensing capacity (kg/day)	130
Equipment capital cost	2,279,897
Installation cost	284,987
Annual maintenance (\$/year)	102,595
Incentives information	
One time capital incentives (grant or ITC)	\$ 1,400,000
Annual operating incentives (grant or PTC)	\$ -
Incidental revenue	\$ -
Demand Projection	
Price of hydrogen at project onset (\$/kg)	10.00
Installation time (months)	18
Demand ramp-up (years)	2
Long-term nominal utilization (%)	70%
Feedstock information	
Cost of delivered hydrogen (\$/kg)	\$ 5.50
Price of electricity (\$/kWh)	\$ 0.120
Price of natural gas (\$/mmBtu)	\$ 8.00
Other operating expenses	
Financing information	
Equipment life (years)	20
Total tax rate (state, federal, local)	38.50%
Debt/equity financing	0.5
Debt type	Revolving debt
If loan, period of loan (years)	
Debt interest rate (compounded monthly)	6.00%

Multi-Station Inputs				
Select station(s) to analyze	3			
Station being analyzed (yellow background)	1	2	3	4
Station type	Delivered gas	Delivered liquid	Electrolysis	On-site SMR
Total dispensing capacity (kg/day)	250	500	130	250
Equipment capital cost	\$ 1,182,165	\$ 1,888,300	\$ 2,279,897	\$ 2,418,598
Installation cost	\$ 285,541	\$ 472,075	\$ 284,987	\$ 283,720
Annual maintenance (\$/year)	\$ 36,056	\$ 57,593	\$ 102,595	\$ 127,674
One time capital incentives (grant or ITC)	\$ 1,400,000	\$ 1,400,000	\$ 1,400,000	\$ 1,400,000
Annual operating incentives (grant or PTC)	\$ -	\$ -	\$ -	\$ -
Annual incidental revenue	\$ -	\$ -	\$ -	\$ -



**Basic Interface
4 stations
station 3 analysis**

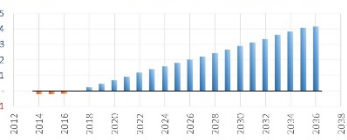
Example Toggles

H2FAST: Hydrogen Fueling Financial Analysis Scenario Tool



Overall Financial Performance Metrics		Restore defaults
Leverage, after tax, nominal IRR	50.16%	
Investor payback period	3 years	
First year of positive EBITD	analysis year 3	
After tax, nominal NPV @ 10% discount	\$ 1,364,749	
Estimated break-even leveraged price (\$/kg)	\$ 5.30	
Cumulative investor cash flow		Labels
Investor contribution + previous year investor contribution		

Station 4: Cumulative investor cash flow, (Millions)



Station(s) Information	
Select interface type	Basic
Enter number of stations to model	4
Total dispensing capacity (kg/day)	250
Equipment capital cost	1,418,598
Installation cost	283,720
Annual maintenance (\$/year)	127,674
Incentives information	
One time capital incentives (grant or PTC)	\$ 1,400,000
Annual operating incentives (grant or PTC)	\$ -
Incidental revenue	\$ -
Demand Projection	
Price of hydrogen at project onset (\$/kg)	10.00
Installation time (months)	18
Demand ramp-up (years)	2
Long-term nominal utilization (%)	70%
Feedstock information	
Cost of delivered hydrogen (\$/kg)	\$ 5.50
Price of electricity (\$/kWh)	\$ 0.120
Price of natural gas (\$/mmBtu)	\$ 8.00
Other operating expenses	
Financing information	
Equipment life (years)	20
Total tax rate (state, federal, local)	38.50%
Debt/equity financing	0.5
Debt type	Revolving debt
If loan, period of loan (years)	
Debt interest rate (compounded monthly)	6.00%

Multi-Station Inputs				
Select station(s) to analyze	4			
Station being analyzed (yellow background)	1	2	3	4
Station type	Delivered gas	Delivered liquid	Electrolysis	On-site SMR
Total dispensing capacity (kg/day)	250	500	130	250
Equipment capital cost	\$ 1,182,165	\$ 1,888,300	\$ 2,279,897	\$ 1,418,598
Installation cost	\$ 285,541	\$ 472,075	\$ 284,987	\$ 283,720
Annual maintenance (\$/year)	\$ 36,056	\$ 57,583	\$ 102,595	\$ 127,674
One time capital incentives (grant or PTC)	\$ 1,400,000	\$ 1,400,000	\$ 1,400,000	\$ 1,400,000
Annual operating incentives (grant or PTC)	\$ -	\$ -	\$ -	\$ -
Annual incidental revenue	\$ -	\$ -	\$ -	\$ -

Real levelized values (\$/kg H₂)

Sales revenue	\$10.00
Capital incentive	\$1.18
Incidental revenue	\$0.00
Production incentives	\$0.00
Maintenance expense	\$2.10
Cost of natural gas	\$1.36
Cost of electricity	\$1.20
Taxes payable	\$1.20
Equipment cost	\$1.19
Road tax	\$0.36
Credit card fees	\$0.25
Installation expenditure	\$0.24
Sales tax	\$0.23
Property insurance	\$0.10
Interest expense	\$0.09
Selling & administrative	\$0.05
Rent	\$0.05
Licensing & permitting	\$0.02
Labor expense	\$0.00
Delivered hydrogen	\$0.00

**Basic Interface
4 stations
station 4 analysis**

Example Toggles

H2FAST: Hydrogen Fueling Financial Analysis Scenario Tool



Overall Financial Performance Metrics		Restore defaults
Leveraged, after-tax, nominal IRR		24.33%
Investor payback period		5 years
First year of positive EBITD		analysis year 3
After-tax, nominal NPV @ 10% discount	\$	2,337,108
Estimated break-even leveraged price (\$/kg)	\$	6.22
Cumulative investor cash flow		
Investor contribution t-1	previous year	Investor contribution



Station(s) Information	
Select interface type	Basic
Enter number of stations to model	4
Total dispensing capacity (kg/day)	1,130
Equipment capital cost	6,768,961
Installation cost	1,356,323
Annual maintenance (\$/year)	373,918
Incentives information	
One-time capital incentives (grant or PTC)	\$ 5,600,000
Annual operating incentives (grant or PTC)	\$ -
Incidental revenue	\$ -
Demand Projection	
Price of hydrogen at project onset (\$/kg)	10.00
Installation time (months)	18
Demand ramp-up (years)	2
Long-term nominal utilization (%)	70%
Feedstock Information	
Cost of delivered hydrogen (\$/kg)	\$ 5.50
Price of electricity (\$/kWh)	\$ 0.120
Price of natural gas (\$/mmbtu)	\$ 8.00
Other operating expenses	
Financing information	
Equipment life (years)	20
Total tax rate (state, federal, local)	38.50%
Debt/equity financing	0.5
Debt type	Revolving debt
If loan, period of loan (years)	
Debt interest rate (compounded monthly)	6.00%

Multi-Station Inputs					
Select station(s) to analyze	All Stations				
Station being analyzed (yellow background)	1	2	3	4	
Station type	Delivered gas	Delivered liquid	Electrolysis	On-site SMR	
Total dispensing capacity (kg/day)	250	500	130	250	
Equipment capital cost	\$ 1,182,165	\$ 1,888,300	\$ 2,275,897	\$ 2,418,598	
Installation cost	\$ 295,541	\$ 472,075	\$ 284,987	\$ 283,720	
Annual maintenance (\$/year)	\$ 36,056	\$ 57,593	\$ 102,595	\$ 127,674	
One-time capital incentives (grant or PTC)	\$ 1,400,000	\$ 1,400,000	\$ 1,400,000	\$ 1,400,000	
Annual operating incentives (grant or PTC)	\$ -	\$ -	\$ -	\$ -	
Annual incidental revenue	\$ -	\$ -	\$ -	\$ -	



Basic Interface
4 station
4 stations aggregate

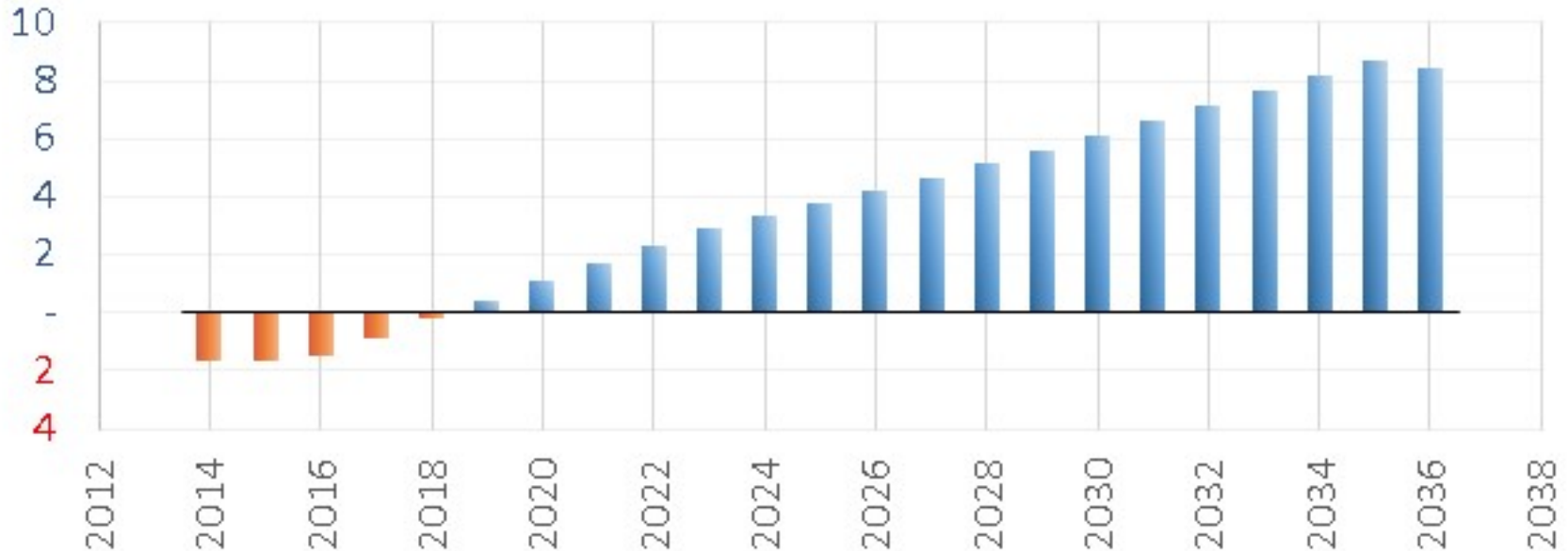
Report Tables

General information	2014	2015	2016	2017	2018	2018	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	
Calendar year (end of year)	2014	2015	2016	2017	2018	2018	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	
Analysis year (end of year)	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
Average Utilization	-	-	0.32	0.35	0.38	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	
Average daily hydrogen sales (kg/day)	-	-	3.82	3.93	4.04	7.91	7.91	7.91	7.91	7.91	7.91	7.91	7.91	7.91	7.91	7.91	7.91	7.91	7.91	7.91	7.91	7.91	7.91	
Annual hydrogen sales (kg/year)	-	-	461.16	144.858	240.506	288.712	288.715	288.715	288.715	288.715	288.715	288.715	288.715	288.715	288.715	288.715	288.715	288.715	288.715	288.715	288.715	288.715	288.715	
Escalation of prices																								
Cost of delivered hydrogen (\$/kg)	-	-	10.00	10.00	10.00	10.78	10.99	11.20	11.41	11.63	11.85	12.07	12.29	12.52	12.75	13.01	13.26	13.51	13.77	14.03	14.30	14.57	14.85	
Cost of delivered hydrogen to station (\$/kg)	-	-	8.50	8.60	8.71	9.52	9.73	9.94	10.15	10.36	10.57	10.78	11.00	11.22	11.44	11.66	11.88	12.10	12.32	12.54	12.76	12.98	13.20	
Cost of electricity (\$/kWh)	-	-	0.12	0.22	0.16	0.13	0.16	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	
Cost of natural gas (\$/MMBTU)	-	-	8.00	8.50	8.31	8.44	8.44	8.44	8.44	8.44	8.44	8.44	8.44	8.44	8.44	8.44	8.44	8.44	8.44	8.44	8.44	8.44	8.44	
Feedstock (\$/kg)	-	-	0.36	0.37	0.37	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	
Labor rate (\$/hr)	-	-	40.00	40.76	41.53	42.30	43.07	43.84	44.61	45.38	46.15	46.92	47.69	48.46	49.23	50.00	50.77	51.54	52.31	53.08	53.85	54.62	55.39	
Maintenance (\$/year)	-	-	373.918	376.943	380.000	383.126	386.344	389.644	393.024	396.484	400.024	403.644	407.344	411.124	414.984	418.924	422.944	427.044	431.224	435.484	439.824	444.244	448.744	
Rent for station location (\$/year)	-	-	3.000	3.057	3.115	3.173	3.232	3.291	3.350	3.410	3.470	3.530	3.590	3.650	3.710	3.770	3.830	3.890	3.950	4.010	4.070	4.130	4.190	
Licensing & permitting (\$/year)	-	-	1.000	1.019	1.038	1.058	1.078	1.099	1.120	1.141	1.163	1.185	1.207	1.229	1.252	1.275	1.300	1.325	1.350	1.375	1.400	1.425	1.450	
INCOME STATEMENT																								
Revenues (annual)																								
Sales revenue	-	-	460.334	1,498,652	2,445,230	3,112,907	3,170,292	3,232,321	3,293,735	3,355,316	3,420,066	3,485,067	3,551,284	3,618,758	3,687,515	3,757,577	3,828,971	3,901,232	3,975,854	4,051,364	4,128,372	4,206,811	2,143,200	
Production tax credit revenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Production tax credit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Credit card fees	-	-	(11,258)	(37,744)	(68,849)	(77,828)	(79,303)	(80,804)	(81,349)	(81,938)	(82,572)	(83,251)	(83,975)	(84,745)	(85,611)	(86,574)	(87,634)	(88,791)	(90,045)	(91,407)	(92,878)	(94,458)	(96,147)	
Sales tax	-	-	(11,033)	(33,723)	(67,279)	(70,540)	(71,371)	(72,221)	(73,090)	(73,977)	(74,883)	(75,809)	(76,755)	(77,721)	(78,707)	(79,714)	(80,741)	(81,788)	(82,856)	(83,944)	(85,052)	(86,181)	(87,331)	
Road tax	-	-	(17,852)	(53,963)	(91,846)	(122,688)	(116,194)	(116,194)	(116,194)	(116,194)	(116,194)	(116,194)	(116,194)	(116,194)	(116,194)	(116,194)	(116,194)	(116,194)	(116,194)	(116,194)	(116,194)	(116,194)	(116,194)	(116,194)
Net revenue	-	-	440.299	1,373,788	2,355,522	2,989,299	2,989,299	2,989,299	2,989,299	2,989,299	2,989,299	2,989,299	2,989,299	2,989,299	2,989,299	2,989,299	2,989,299	2,989,299	2,989,299	2,989,299	2,989,299	2,989,299	2,989,299	
Operating expenses																								
Cost of delivered hydrogen	-	-	176,994	347,184	629,300	1,396,349	1,157,999	1,179,940	1,201,959	1,225,204	1,248,744	1,272,206	1,296,978	1,321,607	1,346,106	1,371,682	1,397,744	1,424,301	1,451,358	1,478,919	1,507,089	1,535,872	782,415	
Cost of electricity	-	-	83,894	256,281	432,251	532,224	542,237	552,241	562,245	572,249	582,253	592,257	602,261	612,265	622,269	632,273	642,277	652,281	662,285	672,289	682,293	692,297	366,619	
Cost of natural gas	-	-	17,753	45,101	76,949	99,665	96,442	97,265	98,104	98,954	99,814	100,684	101,564	102,454	103,354	104,264	105,184	106,114	107,054	108,004	108,964	109,934	64,841	
Total feedstock & utilities	-	-	242,588	648,566	1,071,488	1,702,238	1,295,718	1,629,837	1,664,504	1,671,111	1,678,111	1,685,111	1,692,111	1,699,111	1,706,111	1,713,111	1,720,111	1,727,111	1,734,111	1,741,111	1,748,111	1,755,111	1,762,111	
Labor expense	-	-	156,096	398,344	393,516	400,288	407,060	413,832	420,604	427,376	434,148	440,920	447,692	454,464	461,236	468,008	474,780	481,552	488,324	495,096	501,868	508,640	515,412	
Maintenance expense	-	-	51,124	12,450	11,277	11,100	11,100	11,100	11,100	11,100	11,100	11,100	11,100	11,100	11,100	11,100	11,100	11,100	11,100	11,100	11,100	11,100	11,100	
Rent	-	-	35,382	84,805	86,111	87,417	88,723	89,929	91,135	92,341	93,547	94,753	95,959	97,165	98,371	99,577	100,783	101,989	103,195	104,401	105,607	106,813	108,019	
Property insurance	-	-	2,038	4,123	4,123	4,123	4,123	4,123	4,123	4,123	4,123	4,123	4,123	4,123	4,123	4,123	4,123	4,123	4,123	4,123	4,123	4,123	4,123	
Licensing & permitting	-	-	2,452	2,452	2,452	2,452	2,452	2,452	2,452	2,452	2,452	2,452	2,452	2,452	2,452	2,452	2,452	2,452	2,452	2,452	2,452	2,452	2,452	
Other	-	-	1,000	1,019	1,038	1,058	1,078	1,099	1,120	1,141	1,163	1,185	1,207	1,229	1,252	1,275	1,300	1,325	1,350	1,375	1,400	1,425	1,450	
Total operating expenses	-	-	508,574	1,298,821	1,878,845	2,972,882	2,228,881	2,281,211	2,294,210	2,307,210	2,320,210	2,333,210	2,346,210	2,359,210	2,372,210	2,385,210	2,398,210	2,411,210	2,424,210	2,437,210	2,450,210	2,463,210	2,476,210	
Earnings before interest, taxes and depreciation (EBITD)	-	-	(64,275)	79,867	476,727	696,587	678,508	707,011	735,188	763,089	790,990	818,891	846,792	874,693	902,594	930,495	958,396	986,297	1,014,198	1,042,099	1,069,999	1,097,899	1,125,799	
Interest on outstanding debt	-	-	50,106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Provision for depreciation	-	-	724,956	1,276,752	1,333,395	881,316	636,513	599,053	561,593	524,133	486,673	449,213	411,753	374,293	336,833	299,373	261,913	224,453	186,993	149,533	112,073	74,613	37,153	
Income tax	-	-	(80,168)	(84,244)	(1,896,900)	(830,038)	(275,828)	(1,115)	52,051	74,553	199,623	378,492	557,361	736,230	915,100	1,093,969	1,272,838	1,451,707	1,630,576	1,809,445	1,988,314	2,167,183	2,346,052	
Taxes payable	-	-	(18,815)	(13,567)	(1,043,591)	(1,051,513)	(666)	32,011	47,227	136,527	235,734	334,941	434,148	533,355	632,562	731,769	830,976	930,183	1,029,390	1,128,597	1,227,804	1,327,011	1,426,218	
Net Income	-	-	(143,254)	(111,467)	(1,460,614)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	
CASH FLOW STATEMENT																								
Net Income	-	-	(143,254)	(111,467)	(1,460,614)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	(1,475,834)	
Adjustments to reconcile net income to net cash																								
Depreciation	-	-	(10,815)	211,896	683,168	722,292	711,685	638,828	631,053	645,857	650,890	655,923	660,956	665,989	671,022	676,055	681,088	686,121	691,154	696,187	701,220	706,253	711,286	
Net Cash	-	-	(132,439)	100,429	222,554	246,460	236,053	162,245	160,218	168,061	175,904													

Time Series Examples

All 4 stations:

Cumulative investor cash flow, (Millions)



- User can select from 65 common reportable time series.
- Labels can be turned on and off to show numeric values