DecarbX – The GenAI for Clean Energy Analysis and Research

**What problems does the product solve?**

* A tool that reduces the time to make informed investment decisions.
  + Rather than spending time and money pouring through dozens of reports, employing an army of analysts/researchers, or outsourcing to consultants this tool brings community-vetted, trusted sources to the top of the research stack to facilitate research and analysis to inform key decisions on bankable, clean energy technologies.
* Provides users a chatbot with which to interact to ask questions about clean energy techno-economics.
* In addition to techno-economics, it covers policy, regulatory, and financial topics.
* The GenAI is specially trained only on clean energy topics. The first will be hydrogen.
  + Others will be CCS, CCUS, bioenergy, nuclear energy, solar, wind, hydro and other “clean” energy technologies
* This would have the most current information up through today and draw on latest research as well as news events and other publicly available data.
* \*Would enable levelized cost analysis to quickly calculate project economics
* \* MVP functions are Q&A, summarizing reports and documents.
* \*\* Could integrate a financial tool to calculate key financial metrics of any project type given user input

**How is this different/better than existing solutions?**

* Nothing like this exists. Information as service exists from players like Platts, S&P, IHS, CERA, ARGUS, BNEF, WoodMackenzie, and various other consultants ,Course Hero, etc.
* ChatGPT can answer many questions on clean energy, but it is not considered trustworthy source.
* ChatGPT could go down this route, but the efforts would diverge from their core capabilities and would spend a significant amount of time and money to specialize in a market that is not their focus.
* ChatGPT is also 1.5 years behind with information.
* This tool will be vetted by industry experts through an iterative feedback loop and reward system, therefore making it a highly trustworthy, accurate source of techno-economic analysis and information.

**What is the addressable market size?**

* $70.5B in 2022 and grow to $147B by 2029
  + 1% of 2022 market share is $700MM

**Who are the customers?**

* Users are research analysts (research institutions or firms, consulting firms, investment firms, banks, etc.)
* Investment decision makers (P/E, VC, banks, private investors, energy producers and consumers, government bodies looking to provide funds to deploying additional renewables).
* Net zero/decarbonization leads and teams whose responsibility is to identify and implement net zero solutions

# Business Plan

## Operations:

Year 1:

* Get MVP launched to web-based application
  + MVP provides **four immediate value-adds** not found anywhere else:
    - (1) Current information and research on hydrogen techno-economic topics
      * Production, transmission, storage, end-use applications, integrated systems, carriers, storage, CCU/CCUS, policy, regulation,
    - (2) Ability for users to rate the sources used to answer prompts and suggest new sources.
      * Other uses will be able to verify newly-added sources and karma will be awarded to newly-added sources which have been “approved” by others.
    - (3) Fine-tuned vectorDB and retrieval system to retrieve accurate responses
    - (4) Return relevant images/graphs and sources
* Make beta version available to select group of researchers, analysts, decision makers in network. Keep open for one to two months for feedback. Some additional featurea from this interaction would be:
  + (1) Suggested helpful prompts based on user prompt
  + (2) Modifed rating system so users can thumbs up/ thumbs down sources
* Fix errors and make enhancements based on user feedback.
* Create marketing site to drum up interest, make announcements, build email list, collect credit card numbers, 30-day free trial and paid afterwards,
* Release production ready version and release publicly and start charging users on subscription basis for six months.
* Decide on what next set of features which may include:
  + Expand beyond hydrogen to other complementary technologies
  + Add economic calculations like levelized cost of hydrogen (but applicable to any product)

Year 2:

* Roll out new features on a rolling basis depending on
* Start thinking of how to connect seemingly different topics to facilitate knowledge discovery

## Marketing:

Year1:

* Make public site to advertise and sign-up Beta users.
  + Create a “waitlist” due to strong demand to encourage early signup
* Create presence on social media and discussion websites.

Year 2:

## Financing:

Annual Costs:

Year 1:

* Development:
  + Infrastructure:
    - Front-end/UX: $200k
    - Back-end: $200k
    - Managed Services: $200k
    - GPU services: $200k
    - Cloud services: $200k
    - Other: $200k
* Marketing: $200k
* HR: $150k
* CTO: $200k
* CFO: $200k
* CEO: $300k
* TOTAL: ~$2.2MM

## Leadership and Organization Description:

## SWOT Analysis:

## Marketing Plan:

* Get beta version out to industry experts for ~2 months
  + National Labs
  + Universities
  + Select authors/experts
* Open to public and pitch as an **“The vision is to build an expert-curated GenAI tool to facilitate access to information and bridge knowledge gaps to accelerate investment decision making.”.**