CLEAN ENERGY VENTURES

Investor Profile

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PROJECT FRAME
Convened by Prime Coalition

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Project Frame (Frame) is a nonprofit program, convened by Prime Coalition, built to organize investors around forward-looking emissions impact methodology and reporting best practices.

Our aim is to improve Impact Measurement and Management (IMM) standards for climate-driven investments and to galvanize a network of leadership around transparency and collaboration.

Project Frame is not a regulatory body, nor should its content be considered financial advice. Investor Profiles produced by Project Frame represent the investor's self-reported contributions and should also not be considered financial advice. Our work is intended for readers to review and use their best judgment to accelerate GHG mitigation with transparency and accountability.

Learn more about Project Frame

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Through Investor Profiles, investors in the Frame community articulate their impact strategies in a consistent structure.

Over time, we expect these Profiles will help us develop methodological guidance that is inclusive and based on collective wisdom. They'll also help us understand why and how methodologies shift according to organizational characteristics, such as fund size. In the spirit of Frame's values of integrity and transparency, we design, review, and manage profiles with these goals:

- **Decisions that drive towards impact are what matter**. The purpose of impact assessment is to help improve the choices investors make to steer capital towards innovations and strategies that reduce global GHG emissions over time. All profiles demonstrate how assessment shapes investment decisions.
- **All profiles must be consistent in structure and content.** Profiles are based on common structure and questions that all investors follow. For example, rather than excluding responses to questions that an investor may not have answers to, they share progress, wherever it is. Profiles will also increasingly apply Frame's terminology and taxonomy, rather than language that any individual investor uses on its own. As we learn by doing, we'll add questions and refine structure.
- **Audiences must understand how the theory of change affects methodological decisions**. Investors clearly articulate the reasoning for assessment processes — what they are looking for in assessment and why.
- **Assessment and decision-making continue after initial investments are made**. Investors share how they continue steering companies toward impact after initial investments are made and how ongoing analysis affects their investment and assessment strategies overall.
- **Evolution is embraced**. No process is perfect! In the spirit of transparency and modeling how we learn by doing, we publish work in progress and welcome investors to define what and when they plan to update over time.

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Dashboard

Investment Type(s) or Asset Class	Venture Capital
Asset Sub-Type or Stage(s) Served	Pre-Seed, Seed, Series A
Geography Where We Invest	North America, Europe, Israel
Sector	Built Environment, Electricity, Food and Agriculture, Industry, Land, Transport
Description of Investment Firm	We create global climate solutions by backing expert technical teams and transforming them into market-leading commercial teams.
Impact Assessment Capacity	3 team members
Total Assets Under Management	USD $310m
Percent of Assets Assessed	100
Methodology Alignment	Both planned and potential impact
Time Frame of Assessment	Now until 2050
Alignment with Frame's Values and Principles	Partial alignment
Reporting Realized Impact	Yes
Carried Interest Tied to Impact	No

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Impact Assessment Capacity

Team Name	Clean Energy Ventures (Climate Impact Team)
Number of Team Members	3
Scope *The team's key responsibilities.*	Assess GHG reduction impact for existing and potential portfolio companies.
Governance *The team's reporting structure, such as to whom they report and who reports to them.*	Report to the Managing Partners of the fund
Impact Expertise *The kind(s) or type(s) of impact on which the team focuses.*	Forward-looking GHG reduction, avoidance or removal impact.
Decision Rights *How the team gates or influences decisions, engages portfolio companies, and/or monitors impact*	If our GHG threshold target is not met, we will not make an investment. Post investment we request reporting information from portfolio companies on a regular basis, and assess impact alignment for follow-on investments.

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Funds

Fund Overview

Fund Name	Clean Energy Ventures Fund I
Date of Fund Close (or Estimated)	09/30/2019
Date of Final Investment Made (or Estimated)	06/21/2022
Assets Under Management	USD$110M
Number of Portfolio Companies	20
Asset Sub-Type or Stage(s) Served	Seed + Series A

Design Characteristics

Standard venture capital fund model, providing early-stage venture funding for Seed - Series A companies with high-touch post-investment support

How does your fund serve impact goals?

Standard VC fund design, with explicit GHG emissions impact objective.

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Funds

Fund Overview

Fund Name	Clean Energy Ventures Fund II
Date of Fund Close (or Estimated)	12/31/2023
Assets Under Management	USD$250M
Number of Portfolio Companies	3
Asset Sub-Type or Stage(s) Served	Seed + Series A

Design Characteristics

Standard venture capital fund model, providing early-stage venture funding for Seed - Series A companies with high-touch post-investment support

How does your fund serve impact goals?

Standard VC fund design, with explicit GHG emissions impact objective.

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Theory of Change

Our goal in this section is to clarify your overall vision, why you think that vision has not yet been achieved, and how the design of your interventions or programs get you closer.

Goals/Vision

Clean Energy Ventures creates global climate solutions by backing expert technical teams and transforming them into market-leading commercial teams. We look for technologies (typically hardtech) that can mitigate 2.5 gigatons of CO_2e by 2050 and entrepreneurs that can benefit from our decades of climate tech operating experience.

Path to Goals

For our portfolio companies to succeed, they will need to progress to generating revenues, bring on additional growth equity investors, and be able to scale their technology and businesses globally and obtain substantial market share.

Barriers or Challenges

Historically, there has been relatively limited venture capital funding available to early-stage companies focused on climate change mitigation. This is particularly true for companies developing hardware solutions. Many of these companies are working on newly developed technologies that require time and capital to achieve even early deployment. In most cases, existing baseline technologies are GHG emitting; In some cases, an enabling technology is required for decarbonization pathways to be unlocked (e.g. granular and real-time energy data).

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Values (Optional)

We focus our work on our mission of mitigating the existential risk of climate change and providing venture-grade returns to our investors:

- We prioritize the needs of our LPs and producing high returns on their capital.
- We focus on helping our portfolio companies and the entrepreneurs we work with to succeed.
- We are known for candor, transparency, and authenticity.
- We have high standards
- We approach each interaction with curiosity and to seek diverse perspectives.

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Impact Goals (Optional)

This optional section is used to describe classification systems and/or the quantitative or qualitative impact criteria that gate or influence investment decisions.

Criteria

Gate: Each company should have the ability to avoid, reduce or remove 2.5Gt of CO2-eq GHG emissions by 2050, with additionality.

Influence: Consider SFDR "Do-no-significant-harm" as part of the assessment process. Prioritize near-term impact over long-term impact, hard-to-abate sub-sectors, and consider probability of success.

Connect climate with financial goals.

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Pre-Investment Workflow

Solution Seeking &Screening	We consider high GHG reduction potential as part of our screening criteria and focus only on companies that we believe will have at least 2.5Gt of CO2e GHG reduction impact when screening potential investments.
Meet Founders	We look to engage with companies that have a clear ability to reduce significant GHG emissions. In cases where the GHG emissions reduction impact is not obvious, we may engage with founders via email or meetings to understand their theory of change driving GHG emissions reduction.
Pre-Due Diligence/Initial Review	At initial review, we look to have a clear articulation of the theory of change driving GHG reduction, and potentially a simple high-level GHG model outlining potential GHG impact. We utilize SERC (Simple Emissions Reduction Calculator), an open-access tool CEV developed, to quickly assess expected emissions reduction.
Term Sheet & Due Diligence	During due diligence, we build out a GHG model outlining the expected impact of a potential investment. We typically consider a conservative, base, and high case scenario, conducting modeling to assess what the potential impact of a company might be. Internal team review and debate on the GHG model and impact fine our perspectives. We request annual ESG reporting (including GHG impact) within the term sheet.
Closing	Verify ESG and reporting requirements are included in the transaction documents.

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Methodology

The following section refers to Frame's pre-investment methodology guidance. Visit the Project Frame website and view other related to resources, such as the Frame glossary, to expand your understanding.

Which Frame methodology best aligns with yours?
Frame classifies two basic approaches to assessing impact: planned and potential impact.

Both planned and potential impact

Time Frame of Assessment	Now until 2050
Alignment with Frame's Values and Principles	Partial alignment

How, if at all, is your process different from Frame's pre-investment methodology guidance? (Optional)

Potential impact: We will take into account a realistic maximum market share as part of our analysis: typically, for technologies that require more than 50% market share, we will be more skeptical of a technology's ability to reach such high market penetration (in certain industries, 50% adoption might be feasible). Attribution: for enabling technologies, we will apply a partial % attribution (e.g. 5% or 10%) but don't analyze the attribution based on marginal impact of price change of the technology.

Do you assess for additionality? If so, how do you define it and how do you approach assessment? (Optional)

Yes, we do assess for additionality. We define a baseline for unit impact and try to assess the additional impact from a systems perspective. We also consider a dynamic baseline in our impact modelling.

Do you assess for additionality? If so, how do you define it and how do you approach assessment? (Optional)

Yes, we do assess for additionality. We define a baseline for unit impact, and try to assess the additional impact from a systems perspective. We also consider a dynamic baseline in our impact modelling.

We consider additionality across two dimensions. First, we consider how much GHG emissions will be avoided/removed by 2050, if the company is successful. We include also second or third order effects, so companies do not only count their first order effects. Second, we consider if their contribution to the market is one that would have occurred anyway, without their existence or efforts? (Another framing is “but for” this company and innovation, what would the GHG emissions be?).

Examples

A company making breakthrough improvements in energy density of batteries could consider the higher adoption rates of EVs and electric aircraft as “additional”, due to increase customer adoption (reduced range anxiety) and increased viability of electric aircraft. Therefore, we would consider the GHG reduction impact of increased EV and electric aircraft adoption as part of their impact.

A company selling EVs—but without any technology or business model innovation—but simply benefiting from existing market demand and market growth, would not be considered to have additionality.

Does your methodology incorporate attribution? (Optional)

Yes, we consider attribution in particular for solutions where a company might contribute towards GHG reduction, however may not have a direct impact on GHG reduction (e.g. software technologies, or enabling technologies). We typically utilize a % attribution (e.g. 5% or 10%), but do not consider the marginal impact of price changes of a technology.

We consider value chain attribution, but don't consider financial attribution (e.g. calculation of GHG impact given % equity stake in company)

Resources, Databases, or Datasets Used (Optional)

IEA, EIA, Scientific papers and journals, 3rd party conducted LCA where available for a product/technology.

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Monitoring

Summary

How and what is collected from portfolio companies to understand whether they are meeting impact-related expectations.

Quarterly reporting: Qualitative overview of company's performance

Annual reporting: ESG and GHG impact metrics (we are starting to collect SFDR Article 9 metrics)

Impact and Risk Monitoring & Realized Impact

How are GHG and, if-applicable, non-GHG risks or baseline scenarios incorporated? What questions are asked and how often? How are new projections created?

We will be aligning with SFDR Article 9 reporting requirements. We are aiming for all required SFDR metrics. There are some additional metrics that we are looking to report on and focus on the “elective” metrics that we think are fundamental to what we believe make successful companies (safety, anti-discrimination, etc.).

Evolving Process

How does the methodology change over time? How might it still change?

We continue to refine our approach based on best practices. We are also currently aligning our ESG reporting with EU SFDR guidelines and reporting requirements.

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Reporting

Summary

How is impact-related information shared with external and internal audiences, and how often?

We provide an Impact Report to our LPs annually, and also provide ESG updates in quarterly letters on each of our portfolio companies.

We believe that starting ESG and impact reporting at an early stage of a company's development is valuable. We help our companies start collecting valuable data / metrics that will be required when a company reaches growth stage, or the public markets, and therefore while it may feel like a small "burden" in the near term, it reduces the ESG burden in the long term. We also think this is beneficial to guide them in how they think more holistically about product design & market fit.

We are still developing a structure for attribution and reporting realized impact in the future

How often, if at all, is reporting audited by an independent party?

Our impact reporting is currently not audited by an independent party.

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Engaging

How do you help portfolio companies reach, sustain, or exceed impact expectations?

We support our companies with their GHG analysis, based on best practices from the extensive analysis we've done on a broad range of companies. Oftentimes, these analyses can provide valuable content for future fundraising, sales and marketing, and recruiting documents.

We are hands-on investors, helping our portfolio companies with market strategy, marketing, recruiting & hiring, engineering, leadership coaching, and fundraising, leveraging also our venture partner network to support our companies.

We have also developed a Simple Emissions Reduction Calculator (SERC) tool, which we have made publicly available, to allow any company or investor to get a sense of what their cumulative emissions reduction impact might be. Other investors, incubators and accelerators have also adopted SERC, and utilized SERC in their analyses.

Do you tie portfolio manager compensation to impact actions or performance, or to specific activities they take to engage companies on impact? If so, how?

No.

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Exit Spotlight

Summarize how you consider impact in exit strategies.

We consider how an acquirer might further the company's goals of emission reductions. Where a company's fundamental value proposition results in emission reductions, we can expect that the emission reductions will continue to scale, as an acquirer grows the company and therefore the company's emissions reduction capability.

Most of our companies are still at an early-stage of growth as we invest in Seed and Series A companies, so this has been less central to our work, although we are increasingly focused on this. Generally, our fundamental thesis when investing in companies is that if the technology is deployed, it is so intrinsically linked to emissions reductions, that the more it is deployed, the more emissions are avoided/reduced. For exits, we believe that the acquirers willing to pay the most value, are those who would most benefit from further deploying the tech.

While we do not have specific contracts to prevent this, we typically take board roles and look to invest in mission-driven teams.

Is carried interest tied to impact? If so, please describe.

No.

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Lessons Learned

Does your firm report realized impact? If so, please share a summary of realized impact to date.

We do not report realized impact.

As we are early-stage investors, many of our portfolio companies are still in early-stages of commercializing their technology and products. As our companies mature and their realized impact starts to become substantial, we intend to report on the realized impact of our portfolio companies.

Please share other characteristics of your practice or resources that you are proud of. (Optional)

We have also developed a Simple Emissions Reduction Calculator (SERC) tool, which helps start-up founders quickly estimate the emissions reduction impact of their technology or product. We use SERC to conduct an initial, quick assessment of whether a company might meet our 2.5Gt emissions reduction threshold, but conduct a more thorough analysis during further diligence.

Please share any lessons learned.

We have analyzed the potential GHG reduction impact of many companies, and have found that many start-ups require support in thinking through their GHG emissions and potential reductions.

Many of the companies we screen may have meaningful GHG reduction impact and provide valuable contributions towards a decarbonized economy, however may not have gigaton scale impact. For those companies, we recognize the value of their proposition and may encourage other investors to support them, but our focus remains on companies with multi-gigaton emissions reduction impact.

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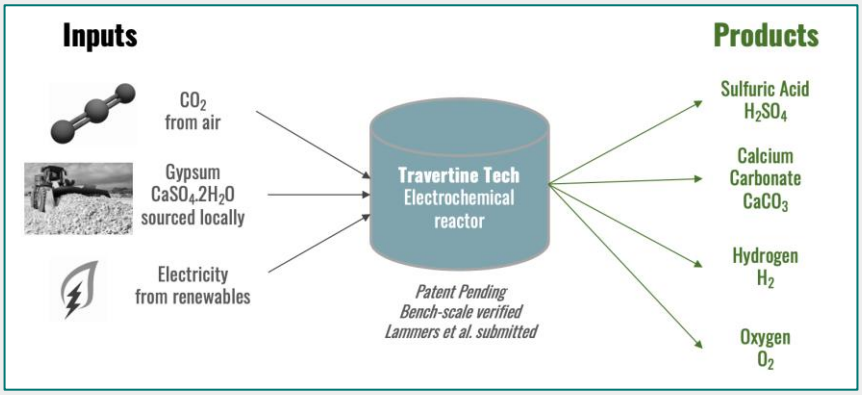
Case Study
Carbon Capture & Sequestration

Learn more about Clean Energy Venture's Carbon Capture & Sequestration Case Study by watching their presentation at Project Frame's June 2023 Community Meeting.



A Input data and key assumptions

Pathway 1

Sulfuric Acid Market		Year
Sulfuric Acid Produced Annually (tonnes)	260,000,000	2022
Market Growth Rate	2.50%	
1 Gt to tonnes	1,000,000,000	

Market Penetration

Year	**2024**	**2035**	**2045**
Base Scenario			
Market Share	0.00%	2%	10%
Annual Growth Rate	1.0%	1.0%	
Conservative			
Market Share	0.00%	5%	20%
Annual Growth Rate	1.0%	4.0%	
Aggressive			
Market Share	0.00%	20%	50%
Annual Growth Rate	2.0%	3.0%	

CO2 Sequestration

CO2 sequestered /tonne of Sulfuric acid	0.5
Avg. Plant Size (tonne/year)	2,000,000

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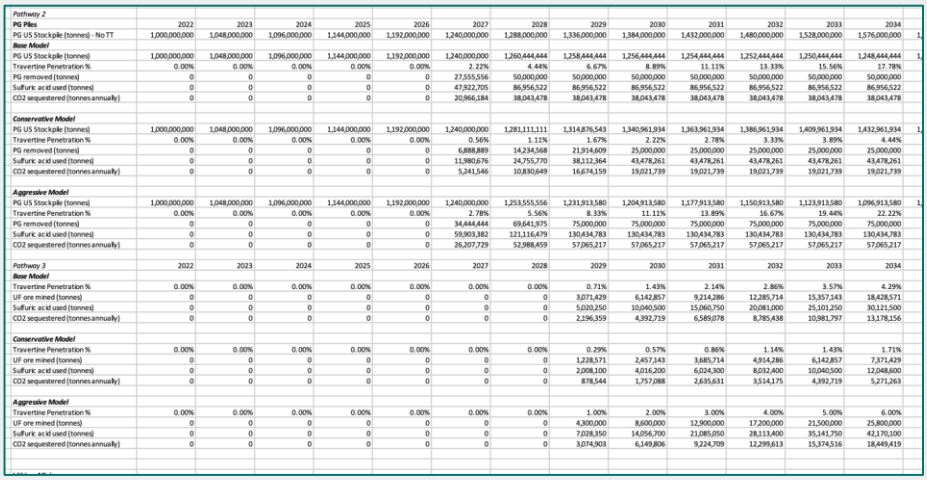
- Overview
- Impact Goals & Process
- Pre-Investment
- Portfolio Stewardship
- Exit Spotlight (Optional)
- Impact & Lessons
- **Case Study**

Case Study
Carbon Capture & Sequestration

B Build model & calculations



Pathway 2													
PG Piles	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
PG US Stockpile (tonnes) - No TT	1,000,000,000	1,048,000,000	1,096,000,000	1,144,000,000	1,192,000,000	1,240,000,000	1,288,000,000	1,336,000,000	1,384,000,000	1,432,000,000	1,480,000,000	1,528,000,000	1,576,000,000
Base Model													
PG US Stockpile (tonnes)	1,000,000,000	1,048,000,000	1,096,000,000	1,144,000,000	1,192,000,000	1,240,000,000	1,260,444,444	1,258,444,444	1,256,444,444	1,254,444,444	1,252,444,444	1,250,444,444	1,248,444,444
Travertine Penetration %	0.00%	0.00%	0.00%	0.00%	0.00%	2.22%	4.44%	6.67%	8.89%	11.11%	13.33%	15.56%	17.78%
PG removed (tonnes)	0	0	0	0	0	27,555,556	50,000,000	50,000,000	50,000,000	50,000,000	50,000,000	50,000,000	50,000,000
Sulfuric acid used (tonnes)	0	0	0	0	0	47,922,705	86,956,522	86,956,522	86,956,522	86,956,522	86,956,522	86,956,522	86,956,522
CO2 sequestered (tonnes annually)	0	0	0	0	0	20,966,184	38,043,478	38,043,478	38,043,478	38,043,478	38,043,478	38,043,478	38,043,478
Conservative Model													
PG US Stockpile (tonnes)	1,000,000,000	1,048,000,000	1,096,000,000	1,144,000,000	1,192,000,000	1,240,000,000	1,281,111,111	1,314,876,543	1,340,961,934	1,363,961,934	1,386,961,934	1,409,961,934	1,432,961,934
Travertine Penetration %	0.00%	0.00%	0.00%	0.00%	0.00%	0.56%	1.11%	1.67%	2.22%	2.78%	3.33%	3.89%	4.44%
PG removed (tonnes)	0	0	0	0	0	6,888,889	14,234,568	21,914,609	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000
Sulfuric acid used (tonnes)	0	0	0	0	0	11,980,676	24,755,770	38,112,364	43,478,261	43,478,261	43,478,261	43,478,261	43,478,261
CO2 sequestered (tonnes annually)	0	0	0	0	0	5,241,546	10,830,649	16,674,159	19,021,739	19,021,739	19,021,739	19,021,739	19,021,739
Aggressive Model													
PG US Stockpile (tonnes)	1,000,000,000	1,048,000,000	1,096,000,000	1,144,000,000	1,192,000,000	1,240,000,000	1,253,555,556	1,231,913,580	1,204,913,580	1,177,913,580	1,150,913,580	1,123,913,580	1,096,913,580
Travertine Penetration %	0.00%	0.00%	0.00%	0.00%	0.00%	2.78%	5.56%	8.33%	11.11%	13.89%	16.67%	19.44%	22.22%
PG removed (tonnes)	0	0	0	0	0	34,444,444	69,641,975	75,000,000	75,000,000	75,000,000	75,000,000	75,000,000	75,000,000
Sulfuric acid used (tonnes)	0	0	0	0	0	59,903,382	121,116,479	130,434,783	130,434,783	130,434,783	130,434,783	130,434,783	130,434,783
CO2 sequestered (tonnes annually)	0	0	0	0	0	26,207,729	52,988,459	57,065,217	57,065,217	57,065,217	57,065,217	57,065,217	57,065,217
Pathway 3	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Base Model													
Travertine Penetration %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.71%	1.43%	2.14%	2.86%	3.57%	4.29%
UF ore mined (tonnes)	0	0	0	0	0	0	0	3,071,429	6,142,857	9,214,286	12,285,714	15,357,143	18,428,571
Sulfuric acid used (tonnes)	0	0	0	0	0	0	0	5,020,250	10,040,500	15,060,750	20,081,000	25,101,250	30,121,500
CO2 sequestered (tonnes annually)	0	0	0	0	0	0	0	2,196,359	4,392,719	6,589,078	8,785,438	10,981,797	13,178,156
Conservative Model													
Travertine Penetration %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.29%	0.57%	0.86%	1.14%	1.43%	1.71%
UF ore mined (tonnes)	0	0	0	0	0	0	0	1,228,571	2,457,143	3,685,714	4,914,286	6,142,857	7,371,429
Sulfuric acid used (tonnes)	0	0	0	0	0	0	0	2,008,100	4,016,200	6,024,300	8,032,400	10,040,500	12,048,600
CO2 sequestered (tonnes annually)	0	0	0	0	0	0	0	878,544	1,757,088	2,635,631	3,514,175	4,392,719	5,271,263
Aggressive Model													
Travertine Penetration %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	2.00%	3.00%	4.00%	5.00%	6.00%
UF ore mined (tonnes)	0	0	0	0	0	0	0	4,300,000	8,600,000	12,900,000	17,200,000	21,500,000	25,800,000
Sulfuric acid used (tonnes)	0	0	0	0	0	0	0	7,028,350	14,056,700	21,085,050	28,113,400	35,141,750	42,170,100
CO2 sequestered (tonnes annually)	0	0	0	0	0	0	0	3,074,903	6,149,806	9,224,709	12,299,613	15,374,516	18,449,419

C Summary for discussion

Gt CO2

Scenario	**Base**	**Conservative**	**Aggressive**
Direct CO2 Sequestered			
PG Piles		Redacted	
Enhanced Weathering			
From Additional Lithium Mined - EVs			
Total			

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