

# Terrament

Radically Scalable Energy Storage

### Problem Long-duration energy storage



Wind & solar demand Long-duration energy storage



Pumped hydro is our only solution, and it's tapped out.



Need a new solution. Must be cheap/scalable/low-risk.



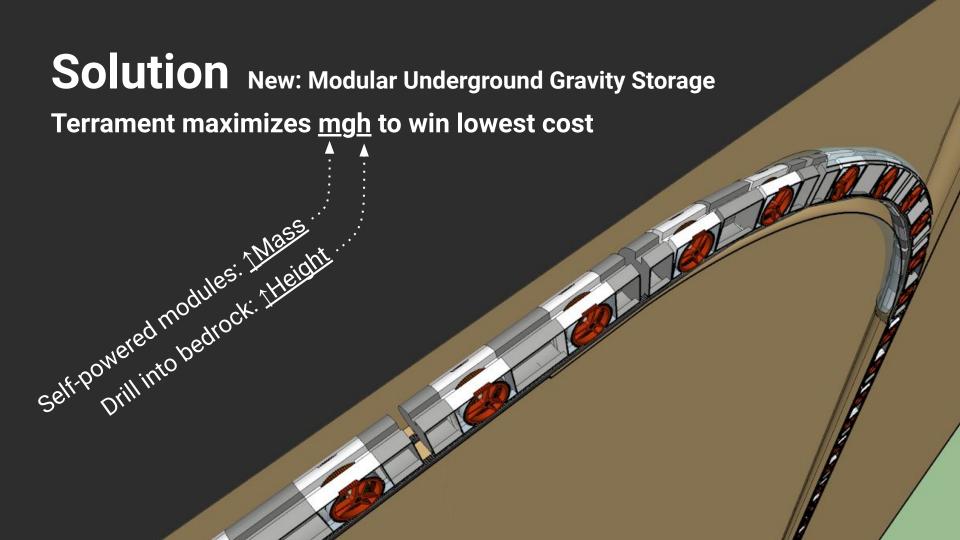
# Solution Old: Pumped Hydro Gravity Storage

 $Mgh \rightarrow (Mass \times \bigcirc^{\downarrow \downarrow} \times Height)$ 

†High demand? Drop water through turbines

**■** ↓Low demand? Pump water back uphill



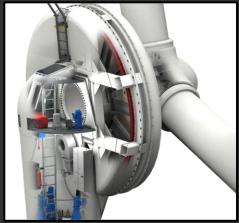


#### Solution: Video



### How it works Maximized weight

- Proven wind turbine tech
- Modules support their own weight
- 100% volume. 1 mile concrete stack.



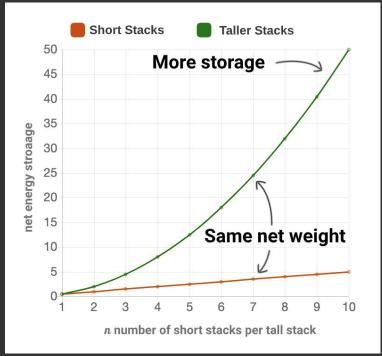




## How it works Maximized height

- Proven mining tech
- 1 mile deep
- 10x height gives 10x storage/weight

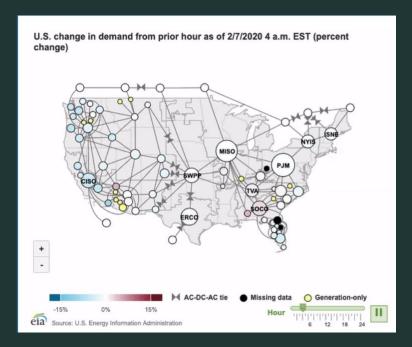


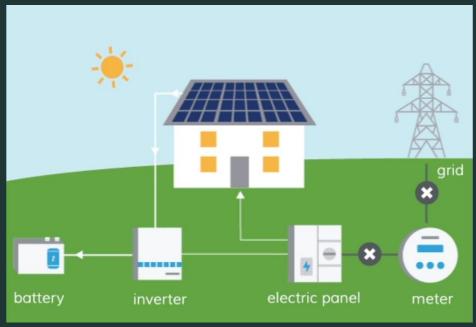


### **Environmental Impact**

100% Wind & Solar only works if we balance variability

Transmission=location balance; Energy Storage=time balance

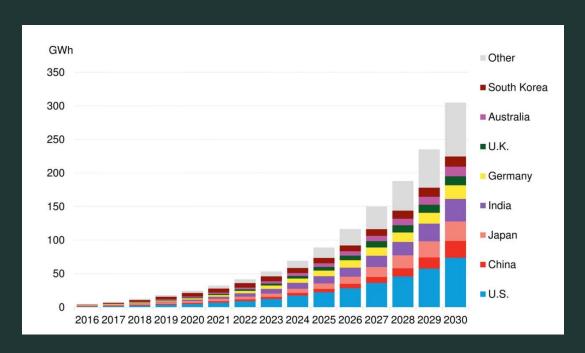




#### Market Growth 3.5% AAGR

TAM, Global: \$1.2 Trillion by 2050

TAM, US: **\$135 Billion by 2050** 



#### **Market Timing**

- Pumped Hydro is tapped
- No market-ready solutions
- Favorable low interest rates

<u>Terrament is Ready</u> ↑Scale ↓Cost ↓Risk

#### **Terrament Team**

Our team of advisors; co-founders TBD



**Eric Chaves** CEO, Technologist

Entrepreneur, Software Developer. Background in **Architecture & Engineering** 



**Colin Bateson** Mechanical Engineer, PhD



**Gregory R. Scott** Civil Engineer, PE



Mengye Chen



Civil Engineer, PhD (2021)



**Etinosa Ogiesoba** Electrical Engineer, ME





Isabelle Heye Mechanical Engineer, ME



**Support Crew** Creatives, etc.

#### Business Model Sell a green energy "holy grail"

24/7 green energy, cheaper than oil

- Renewables → 4¢/kWh
- Terrament → 2¢/kWh

= 6¢/kWh LCOE. <u>Cheaper than fossil fuel!</u>

#### Key Early Strategies

- Inspire & hire top experts
- Find patient, long-term investors
- Launch with small utility partners
  - o Growth in CA, OR, WA, NY, etc

#### Typical Project Scale

• Power: 200 MW → 2 GWh

• Cost: \$175M → \$90/kWh

• LCOE: 2¢/kWh



#### Go To Market Sell expertise. Outsource scale.

Leverage patents. Sell solutions, and IP.

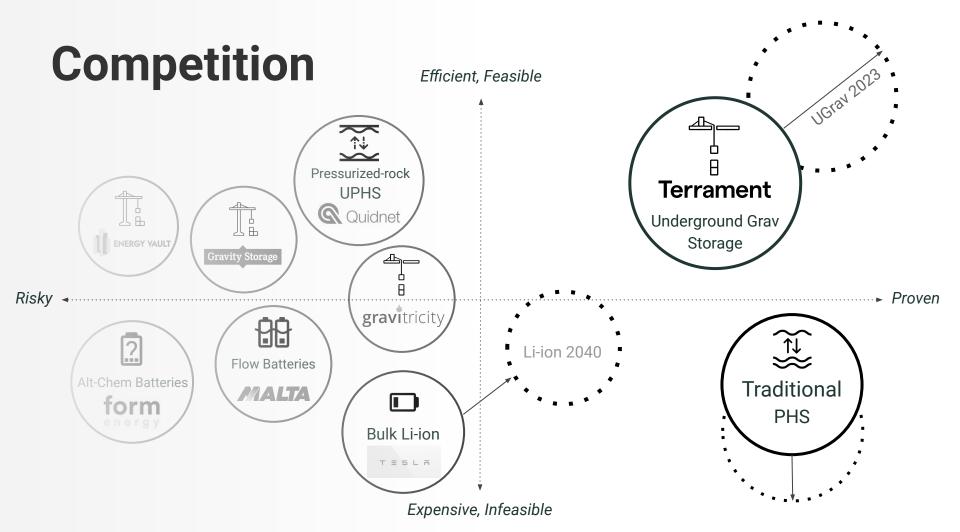
- Terrament will architect & engineer installations.
- Utility companies will fund and own them (with outsourced construction)

#### <u>Years 1-5</u>

- Sell/lease solutions
- Partner with utilities & energy developers to fund & build them.

#### Years 5+

- Build our own installations
- Value stack energy storage products



### **Financial Projections**

We need patient investors seeking huge, long-term rewards.

1 yr

#### Alpha Phase

Debt: \$1 million

Sales: \$0 Profit: -

- Research and Design
- Prototyping

3 yr

#### **Market Launch**

Debt: \$10 million

Sales: Minimal

Profit: -

- Launch First Projects
- Accelerate partnerships
- Sell IP and hardware

8 yr

#### **U.S. Expansion**

Debt: \$XX million Sales: \$XXXX million

Profit: \$XX million

- Multiple Projects
- Sell Energy Contracts
- Expand Product Lines

13 yr

#### **Global Expansion**

Debt: 0

Sales: \$XX billion
Profit: \$X billion

Become a global leader in clean-tech energy

## Our Ask: \$200k Angel Investment

We're seeking \$200k to carry us to our \$1M Seed Round

# **Angel Round**

Ask: \$200K

Timing: In 3 months

Monthly Burn: \$10K

Current Runway: 6 months

- Patent lawyer fees
- Grant writing consulting fees
- Further develop designs and 3D CAD models



# **Seed Round**

Ask: \$1M

Timing: In 9 months Monthly Burn: \$20K

- Develop a functional bench-scale prototype
- Leverage Alpha to secure contract w/ partner Utility

# Terrament

Thank you

See Appendix

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