

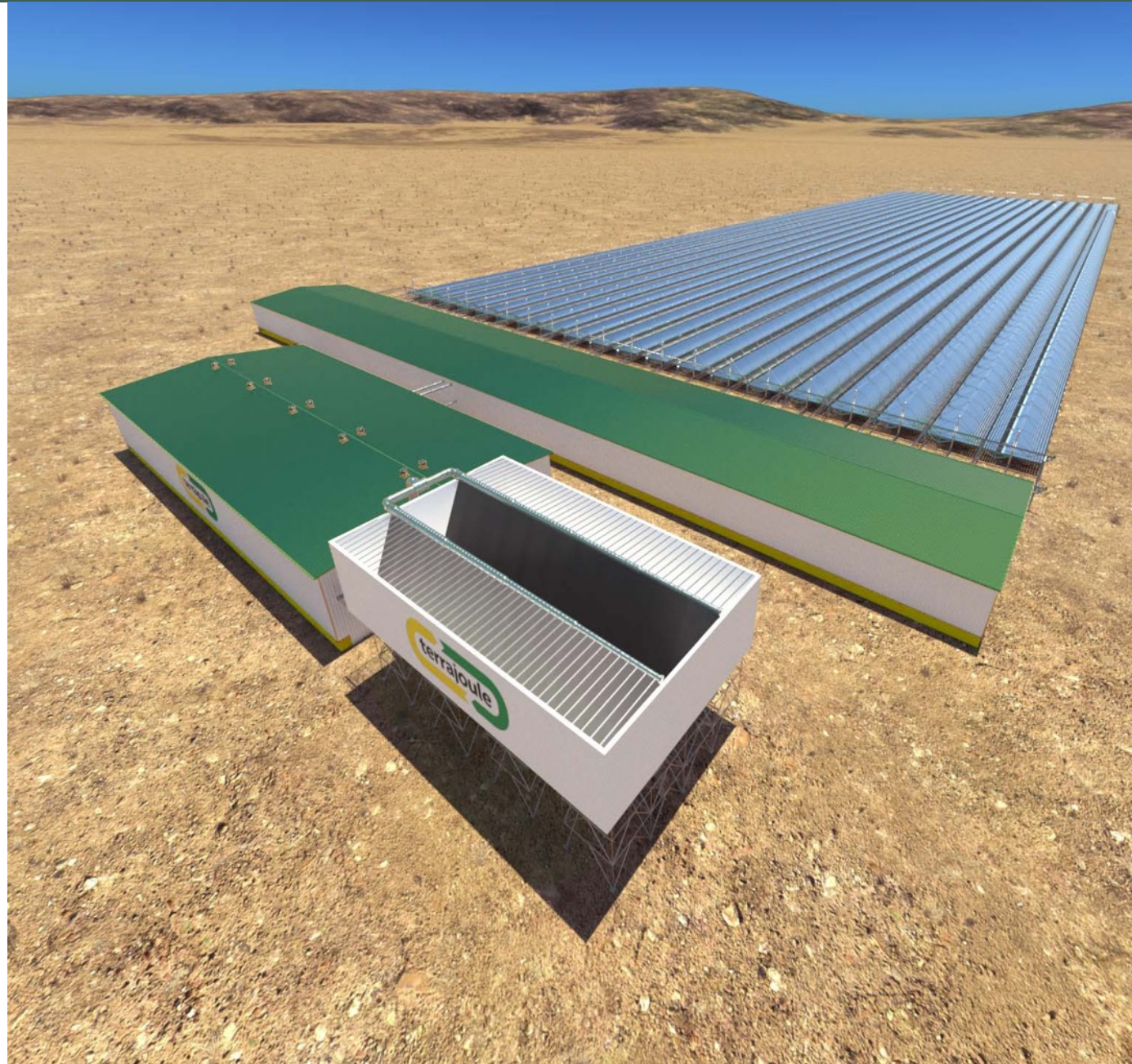


Terrajoule Energy

*The Scalable Solution
for Data Center Power
with Waterless Cooling*

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AI Data Centers Have a \$100B Problem

Power, Cooling & Water are AI's Fundamental Constraints

Terrajoule's Modular Thermal Solar is the Complete Solution

What Validates the Modular Thermal BTM Strategy?

Sam Altman's Exowatt / ExoRise:

Modular thermal solar for

“behind-the-meter and off-grid deployments across the U.S. Southwest” for AI data centers

How is Terrajoule different?

- 1) Actual technology perfected over years that meets its cost and performance goals;
NOT a “fake it ‘till you make it” strategy
- 2) Designed from day 1 to *scale at the pace of AI*, without investor dilution;
a *sanely-valued* dark horse in the uncrowded energy segment of massive AI Infra

The Urgent Problem that Terrajoule Solves: AI Growth is Limited by Power, Cooling & Water

- Hyperscalers face an **URGENT lost profit** problem
- Coal, gas, the grid, nuclear, geothermal, wind, PV & batteries are **too slow, too costly**



Urgent Problem = Terrajoule Opportunity

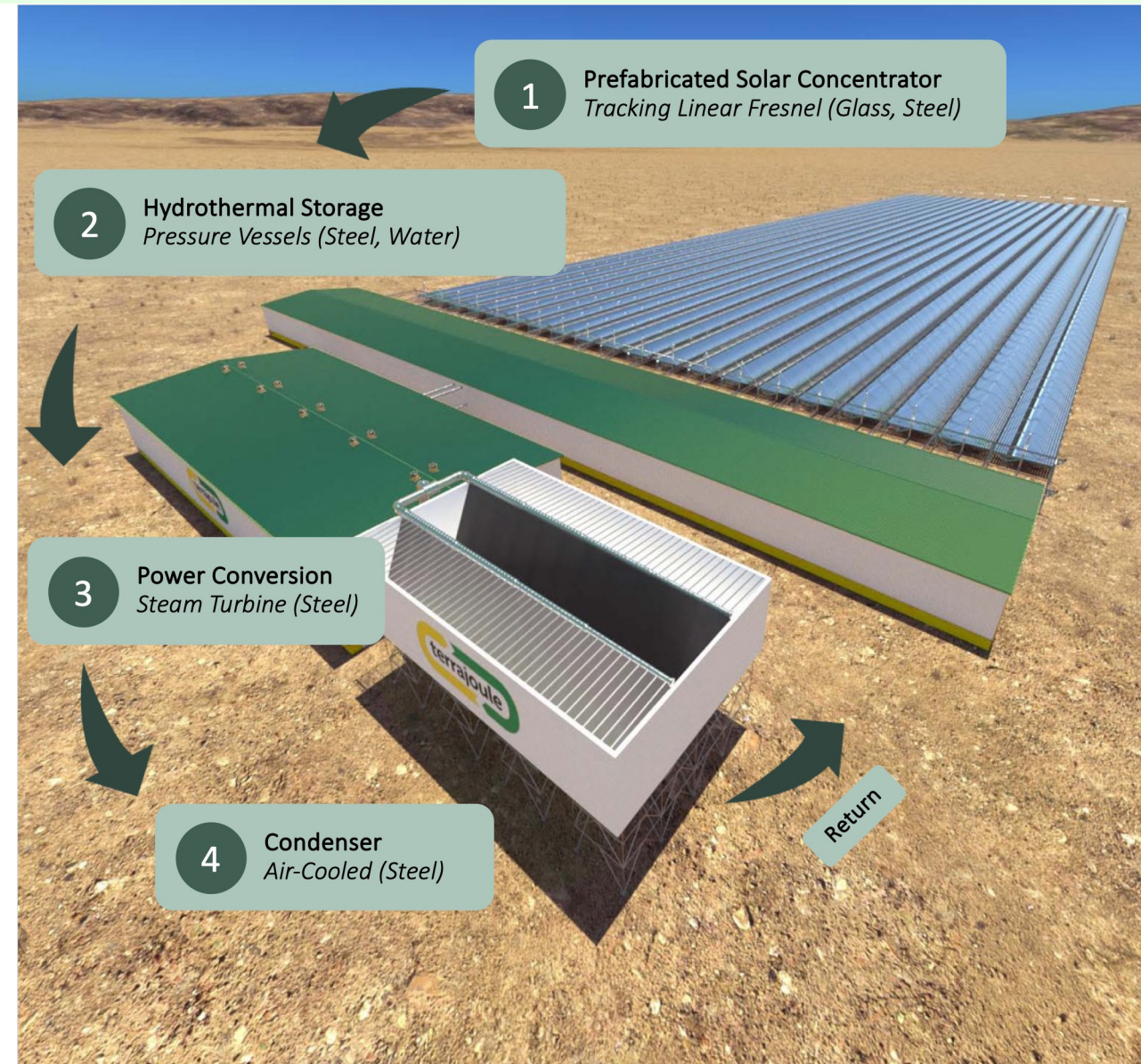
Terrajoule: Clean Firm Electricity **Night** & day

Modular *thermal* Solar + Storage

- 1 **Harvest** solar energy by superheating water
- 2 Hydrothermal energy **storage**: superheated water
- 3 **Dispatch** electricity: steam turbine
- 4 Closed steam/water cycle: *no water consumption*

Unlimited scale, for example:

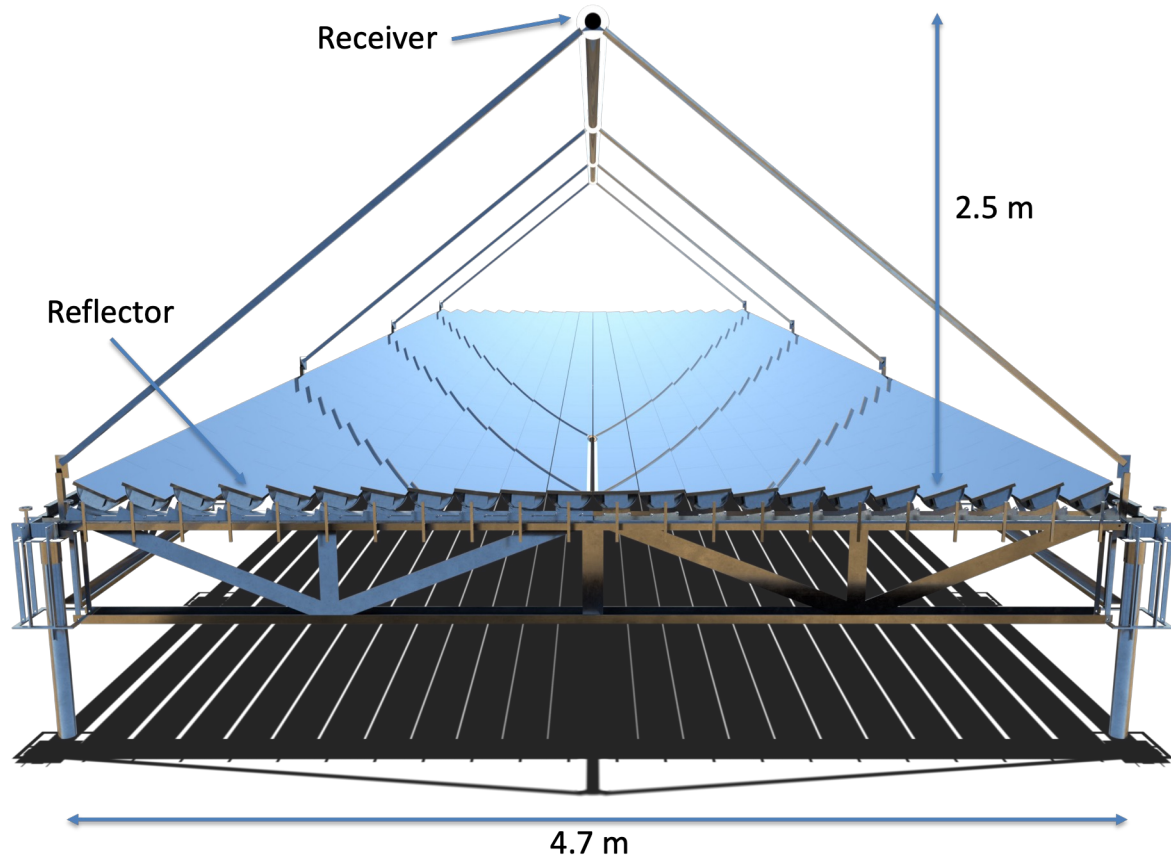
- 200 modules powers a **Gigawatt** data center
- 5 MW per module, 24 hours storage



How it Works: Advanced Simplicity

1

Prefabricated Solar Concentrator (PSC)



2

Hydrothermal Storage



3

Steam Turbine

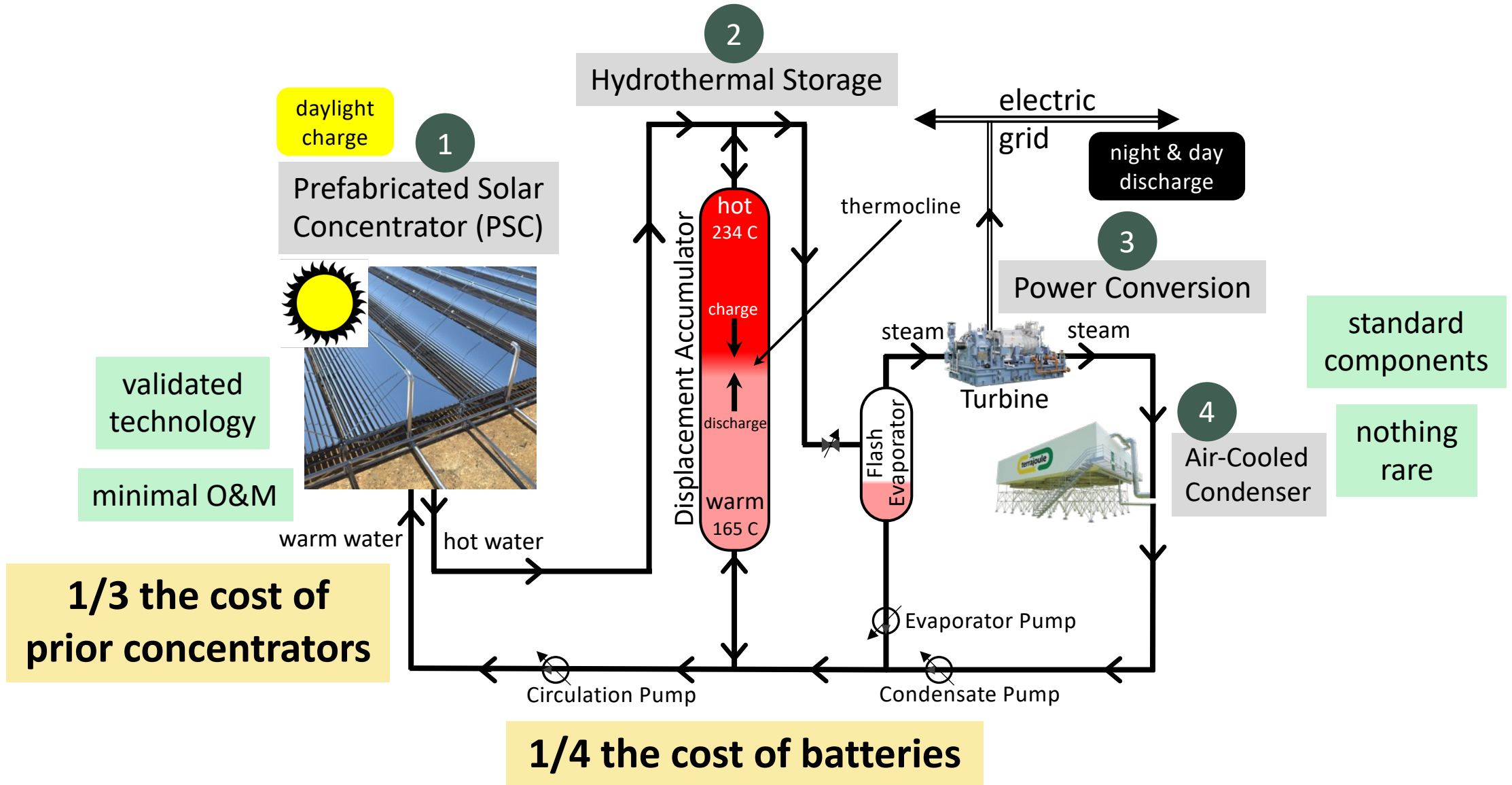


4

Air-Cooled Condenser



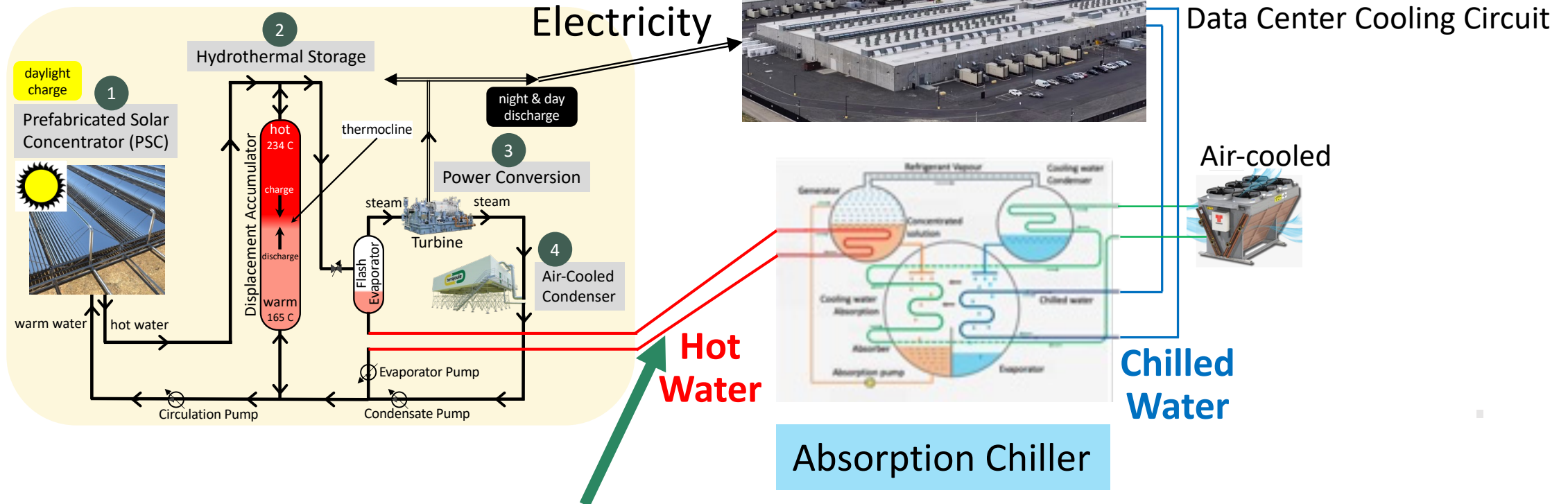
How it Works: Electricity Generation



Waterless Cooling: Thermal Technology Solves the Problem

Terrajoule Electricity + Heat

Data Center



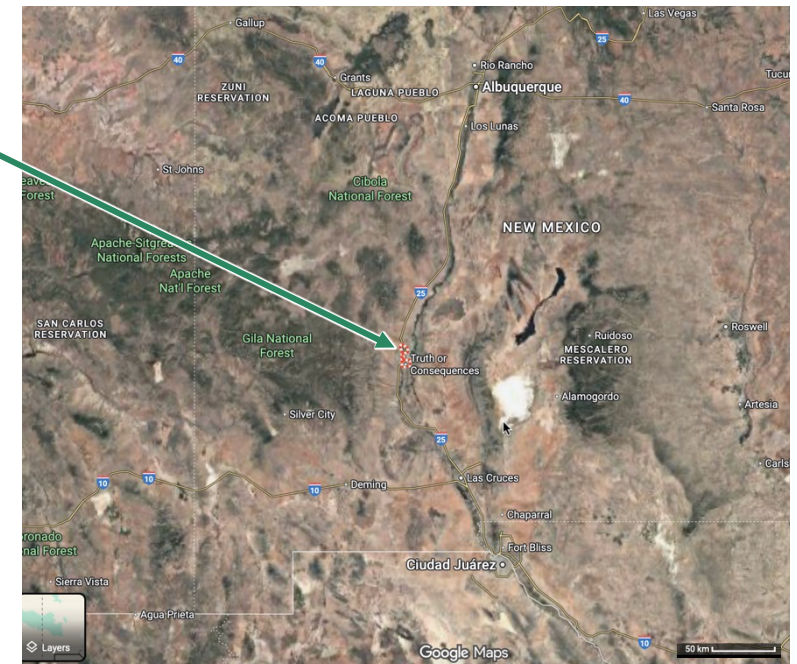
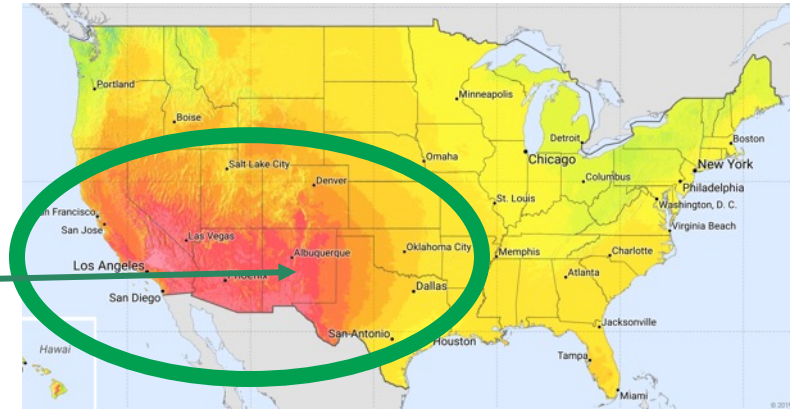
Hot water is a byproduct of the thermal power cycle (PV and batteries *cannot do this*).

Hot water provides energy to the absorption chiller without consuming additional electricity or water.

Ai Infra Solution: Disruptive Modular *Thermal* Solar+Storage

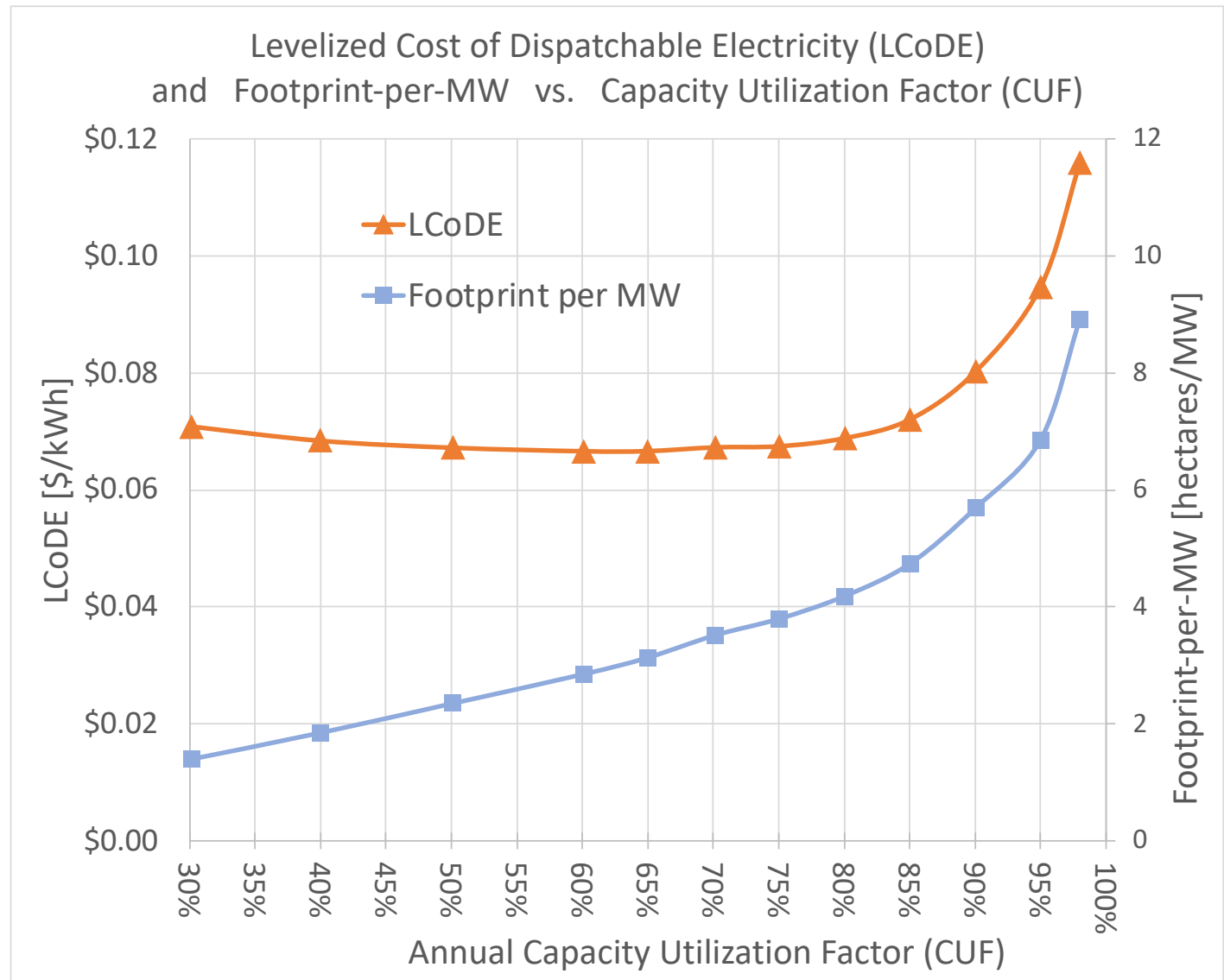
Terrajoule delivers *what data centers need*:

- Destiny control – power now - no waiting in line
- Exploit cheap abundant sunny land
- Off-grid or on-grid 🙌 🙌
- Ultra-reliable “five nines” electricity & cooling
- Less than *half* the cost of PV + battery
- **No** batteries,
no disrupted supply,
no water consumption,
no rare metals,
no gigafactories to build



Cost Factors

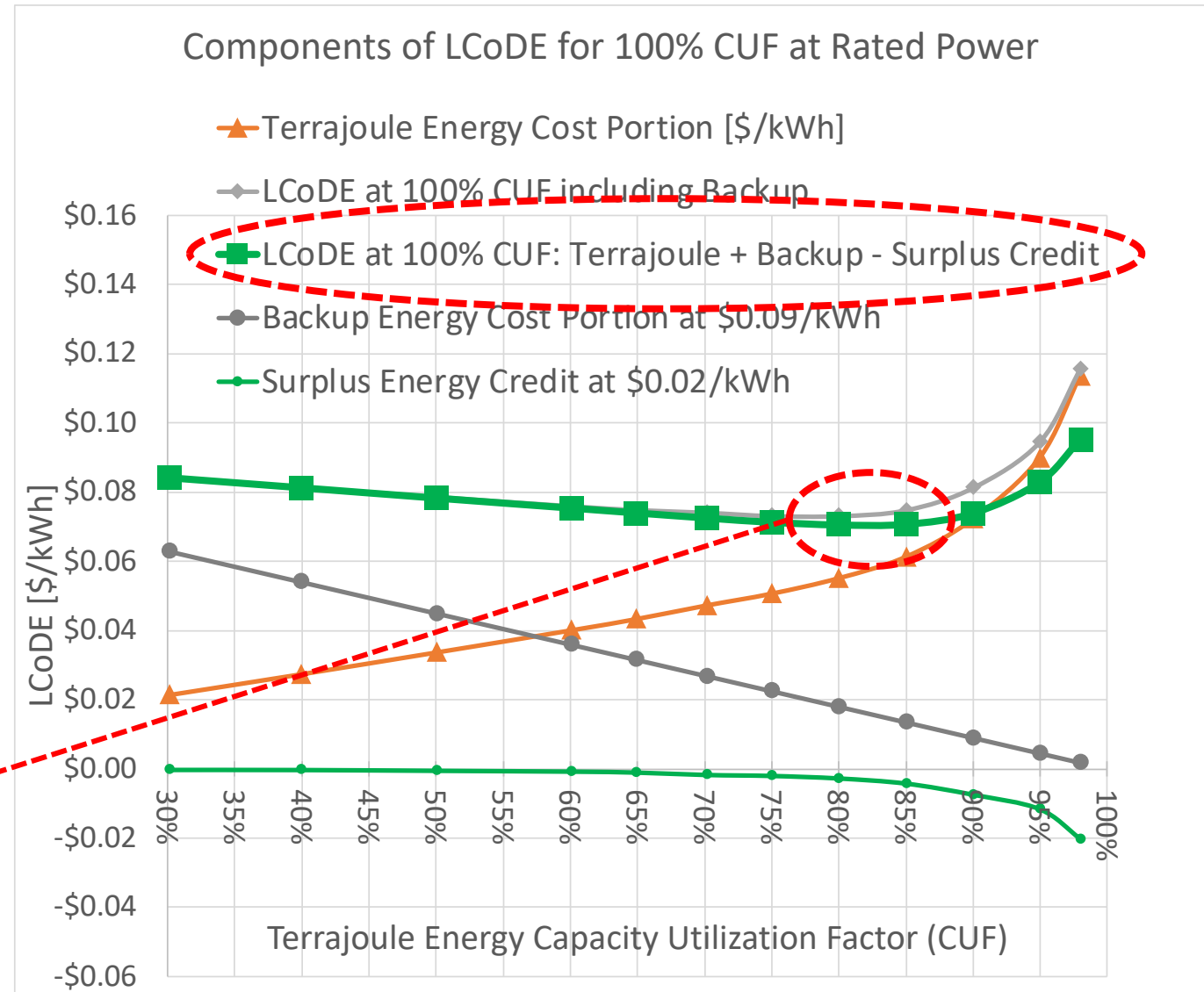
- Capacity Utilization Factor (CUF) is the % of hours in the year during which a power plant generates electricity at its rated power
- Terrajoule's Levelized Cost of Dispatchable Electricity (LCoDE) depends on the system's CUF
- Increasing the energy harvesting footprint and storage hours increases the CUF
- This example assumes 8% WACC



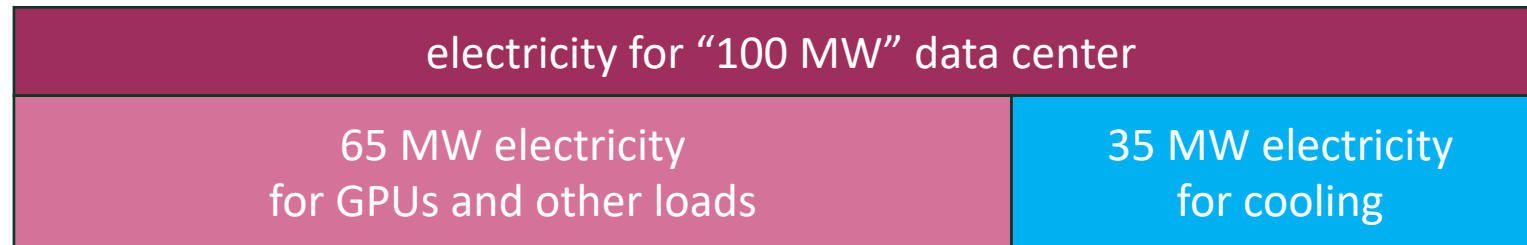
Cost Factors

Components of a 99.999%
“five nines availability” CUF (~100%):

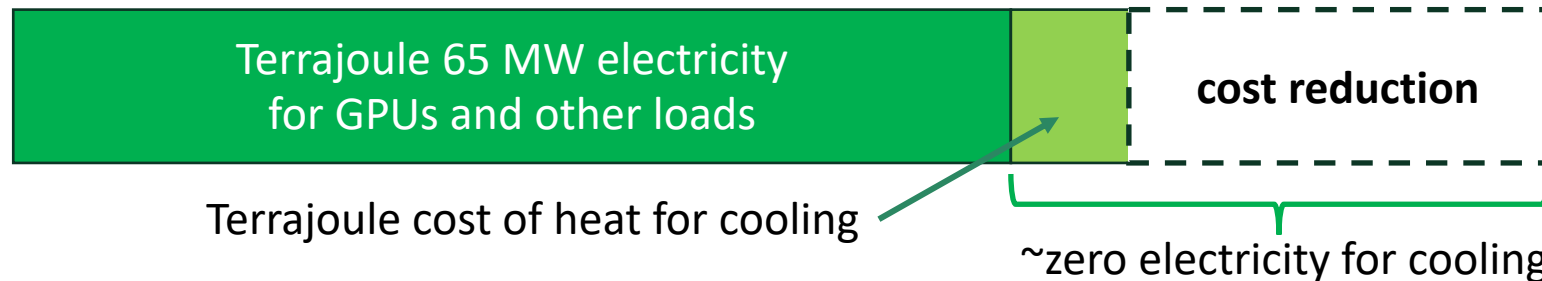
- Terrajoule component configured to generate a target CUF, e.g. 85%
- Backup fuel component generates the balance, e.g. 15%
- Seasonal surplus dispatchable energy value enhances ROI
- This example assumes 8% WACC
- The *sweet spot* includes Terrajoule modules configured to deliver 80% to 90% CUF



Benefit of Heat-Powered Waterless Cooling



Terrajoule electricity plus heat-powered absorption cooling

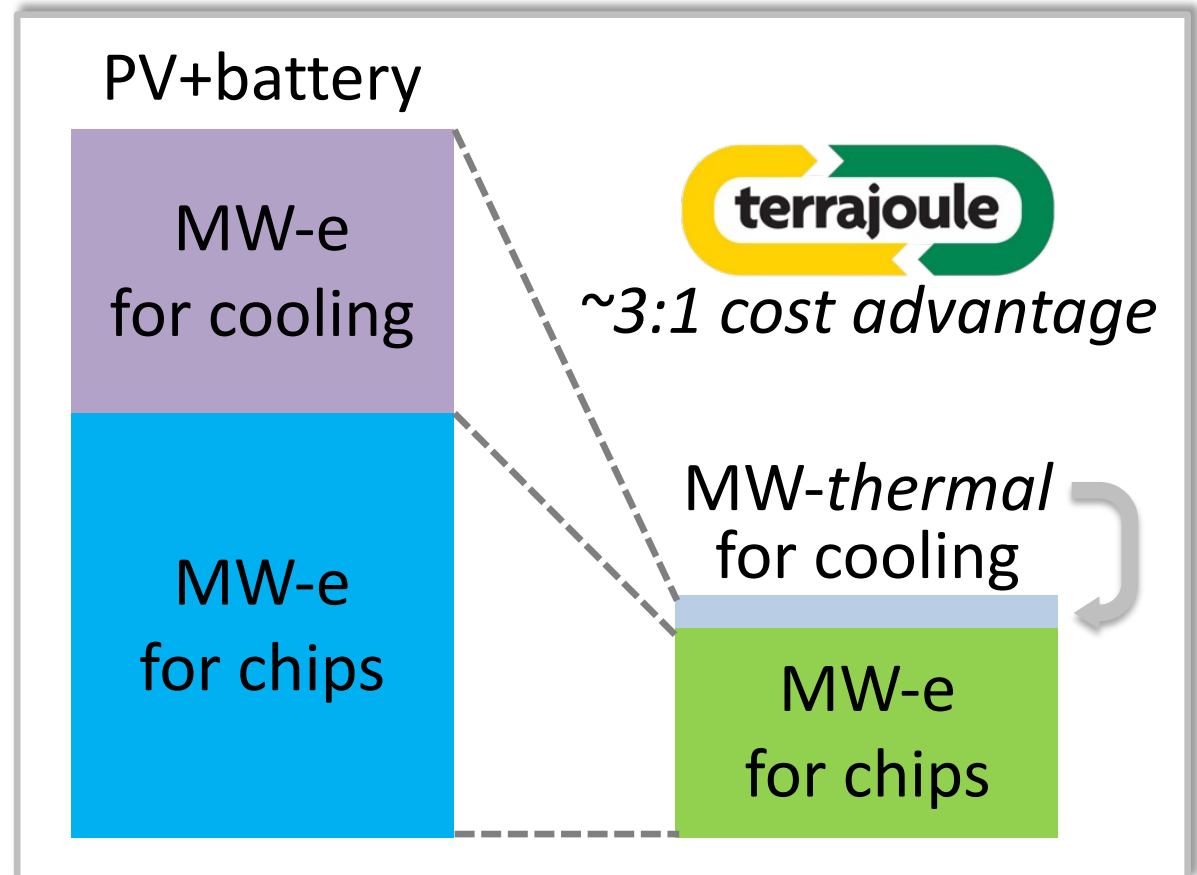


- Regions with abundant sunlight and land yield low-cost solar power
- Evaporative cooling is not practical due water scarcity
- Heat-powered absorption chillers cool with negligible electricity and no water
- Terrajoule provides abundant heat for cooling as a byproduct of electricity generation

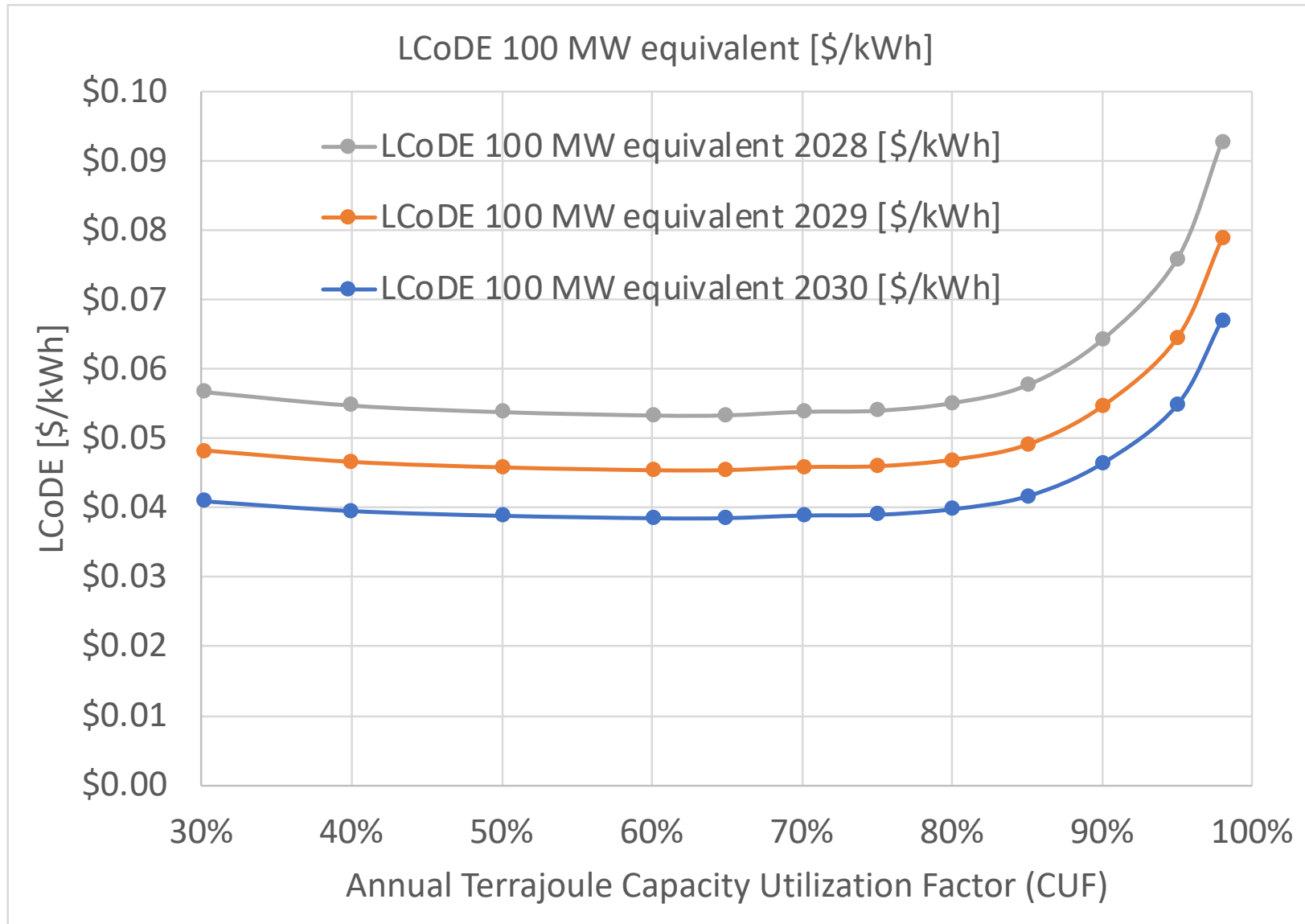
Apples-to-Apples Comparison vs. batteries + PV solar panels

The Distinctions:

- For starters, Terrajoule's cost of clean firm electricity is ~half that of batteries+PV
- Combining electricity with waterless cooling makes the cost difference even more decisive
- Terrajoule scales up much faster without gigafactories that dilute shareholders
- Terrajoule scales fast without the supply chain risk of batteries

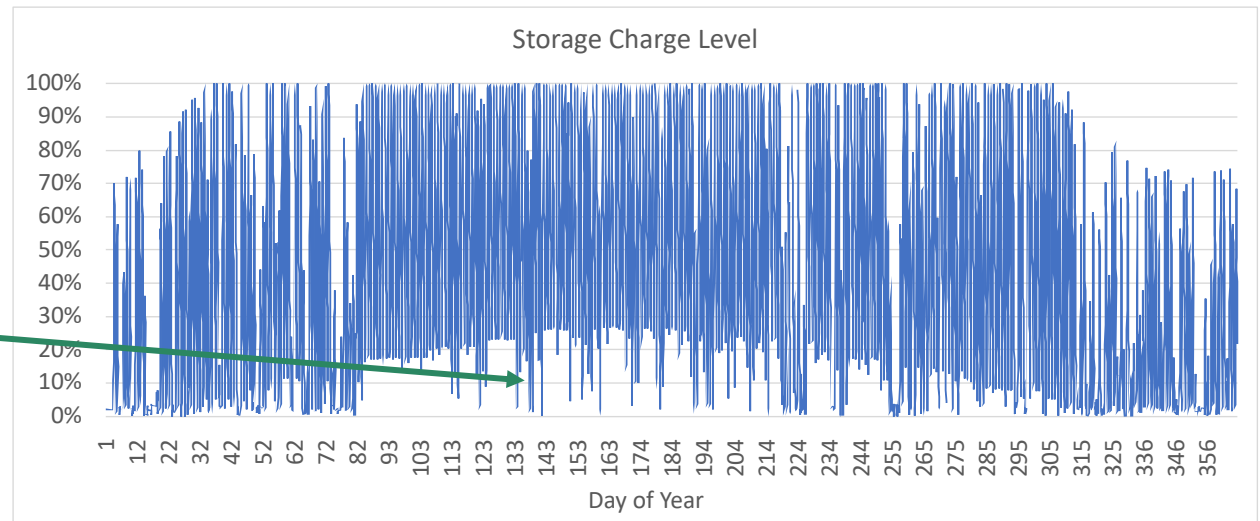
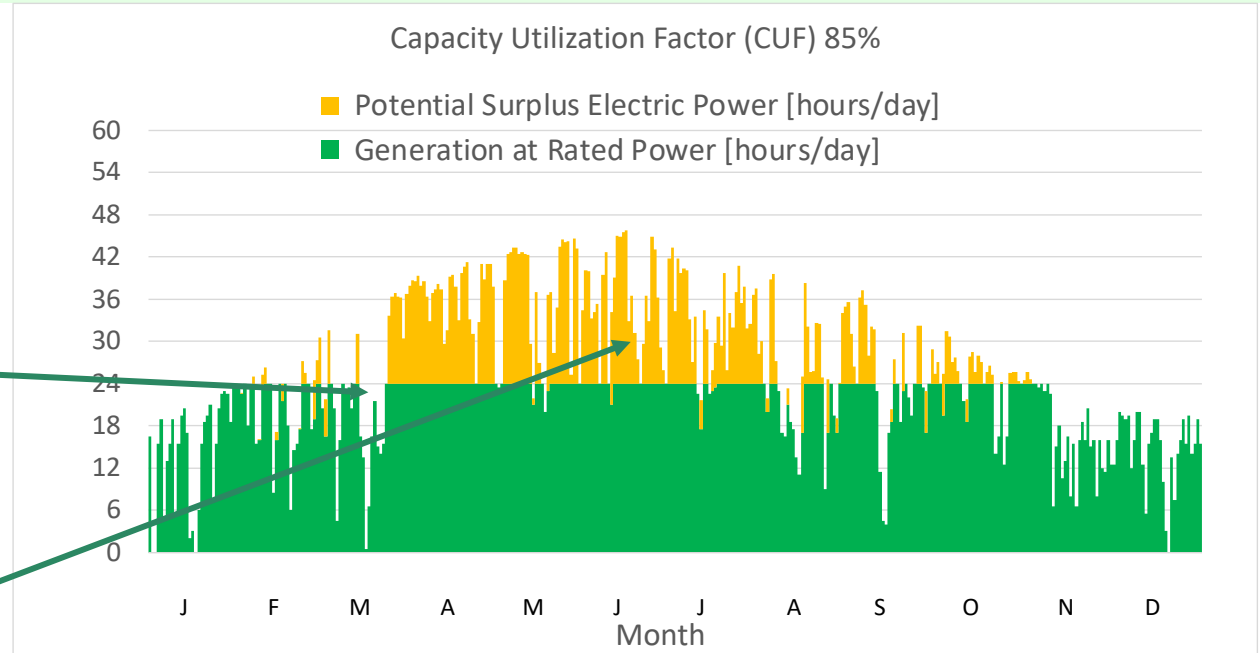


Terrajoule Electricity & Cooling Energy Cost for 100 MW Data Center



Backup and Surplus

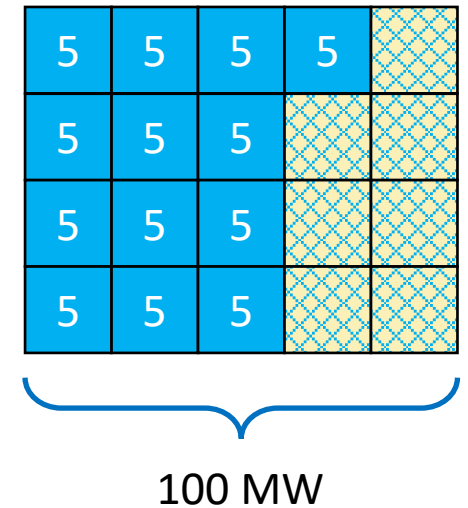
- At 85% CUF, Terrajoule provides continuous power for extended periods of the year
- A backup power source fills in the hours for days that have insufficient sunlight to generate 24-hour power
- There is substantial surplus energy during seasons with longer days
- Surplus energy can be stored and dispatched for maximum value
- Storage provides 24-hour power for fully and partially sunny days



“Five Nines” Availability

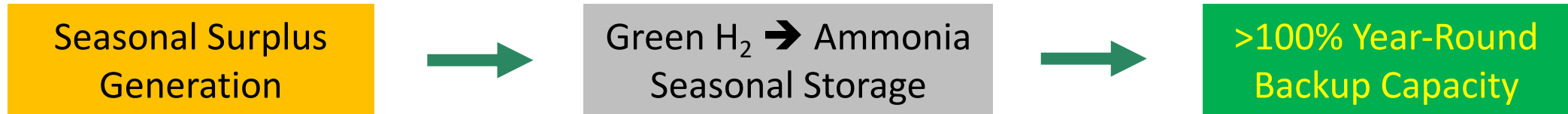
“Five Nines” is 99.999% CUF → ~ 5 minutes annual downtime

- 100 MW comprises 13 x 5 MW modules generating 65 MW of electricity plus heat for 35 MW of equivalent cooling power
 - no single points of failure, very high redundancy
- Scheduled maintenance done module-by-module on a rolling basis
 - Less than 5 days per year per module
 - Performed during surplus power periods (most of the year)
- Unscheduled downtime is extremely rare
- Worst case is 2 modules down at a time: 1 scheduled, 1 unscheduled
- Power blocks are oversized by ~20% to handle 2 modules down at a time
 - Minimal CapEx impact

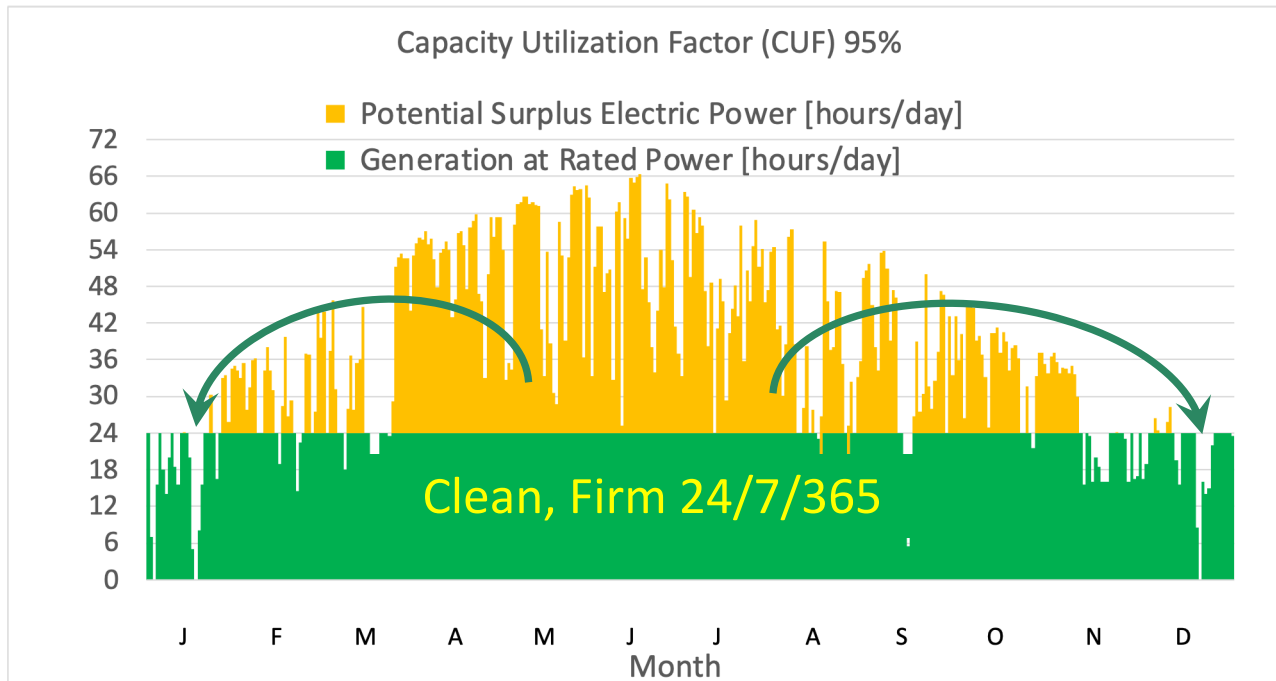


Zero Emissions “Five Nines” Scenario

Off-grid with “five nines” ultra-firm onsite power ... connect to the grid later

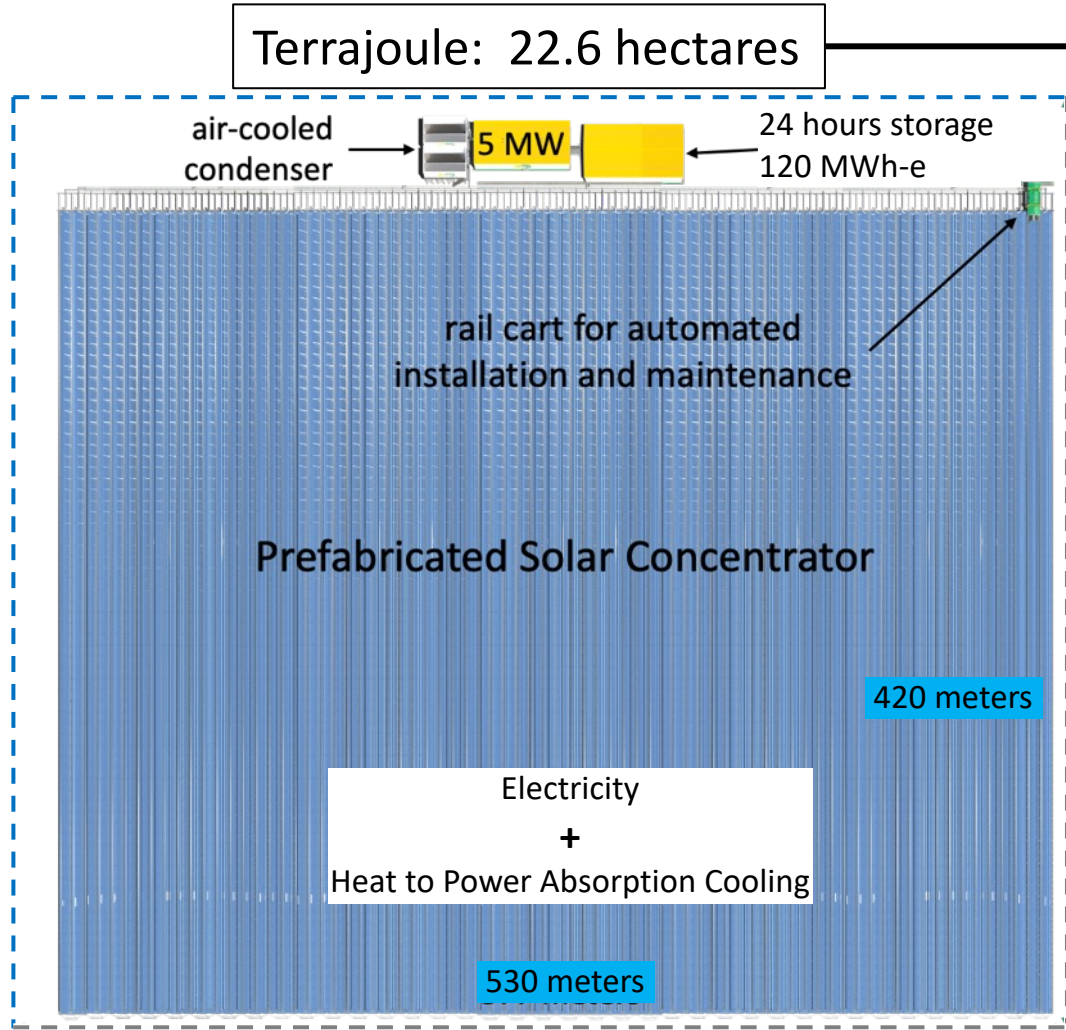


Zero purchase of backup fuel, no gas pipeline required



Rated Power for Electricity & Cooling [MW]	100	100
CUF at Rated Power	90%	95%
Footprint [acres]	1,051	1,268
Storage [hours]	18.5	28.6
Electricity Generation [GWh/year]	513	542
Backup Requirement [GWh/year]	57	28
Surplus Electricity [GWh/year]	212	333
Surplus-to-Backup RTE Requirement	27%	8%
Price 2028 [\$m]	\$455	\$567
Price 2029 [\$m]	\$387	\$482
Price 2030 [\$m]	\$329	\$410
LCoDE 100 MW equivalent 2028 [\$/kWh]	\$0.064	\$0.076
LCoDE 100 MW equivalent 2029 [\$/kWh]	\$0.055	\$0.064
LCoDE 100 MW equivalent 2030 [\$/kWh]	\$0.046	\$0.055

Apples-to-Apples Comparison: Terrajoule vs. PV+battery



PV+ battery: 28.8 hectares

5 MW
24 hours storage
120 MWh-e

Electricity
NO Cooling
Cooling requires ~40%+ more electricity cost
and ~40% more footprint than shown here.

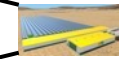
But isn't Terrajoule just "CSP"? Isn't CSP dead?

No, Terrajoule is **A-CSP**, the **Anti-CSP**.



CSP: monolithic, one-off projects, assembled onsite

both have mirrors!



- Terrajoule A-CSP
- Modular
 - Mass-produced
 - Prefabricated offsite
 - Automated installation

¿ must cost the same ?



both have wheels!



What you know about conventional CSP does not apply to the A-CSP, not even close

We are A-CSP. **We beat gas and PV+battery at scale**, decisively.

How it can be so cheap: Relentless Simplification



The old way: Massive, labor intensive



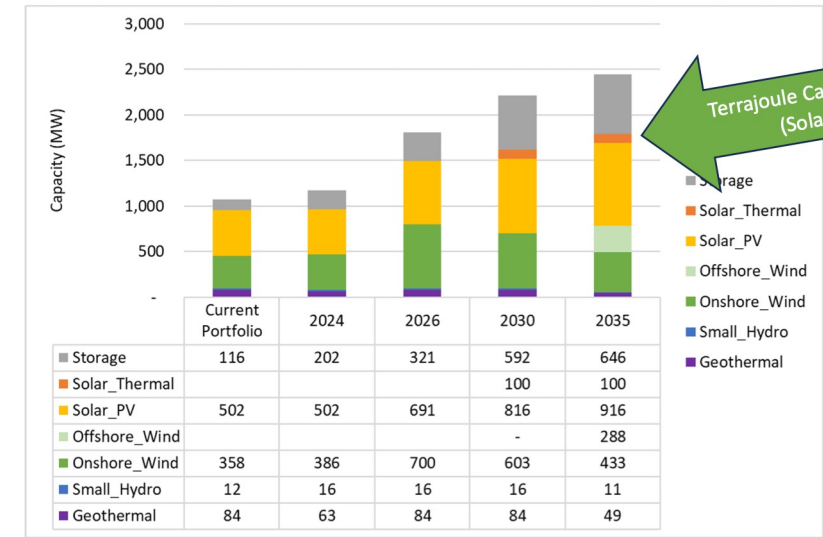
The Terrajoule way:
Relentless innovation for low-cost and simplicity



Traction

- **Collaborating** with absorption chiller company to penetrate data center markets!
- **Market fit and competitiveness validated** by California CCA utility's IRP model
 - 100 MW lowest-cost-best-fit selected in competition with all options
 - Extrapolates to 10 GW in 2030 in California
- **Strong interest** from NTPC, India's 75 GW utility
 - Will host 5 MW pilot, then multiple 50 MW x 8-hour
- **Fossil gas decarbonization** customer-funded study with major oil & gas producer

Figure 1: Peninsula Clean Energy Preferred Portfolio Capacity



Rapid Risk Mitigation & Commercial Deployment

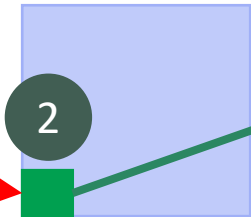


1

Market-ready power plant at our Coimbatore facility

2

Side-by-side single-module validation at existing customer site
➔ Rapid field-conditions validation with zero project risk to customer

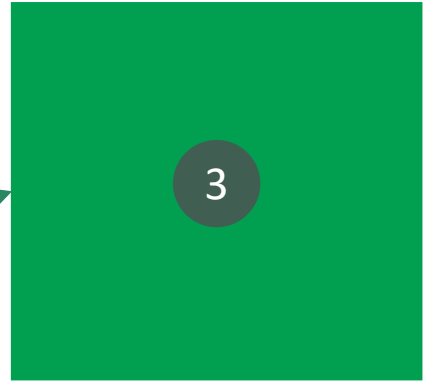


2

Hurdling the Barriers to Entry. At Speed.

3

Terrajoule power for multiple 200 MW+ projects



3

Business Model: Sell Hardware at a Profit with Positive Cash Flow

We use the *standard* energy project financial structure

- We sell complete power plant kits, at a profit, to a Project Developer
- Project Developer sells electricity to a data center or utility
- Project finance pays for Work In Process
 - ➔ Critical: We scale up fast without bearing inventory cost
 - ➔ Positive cash flow without shareholder dilution

Competition

- Grid-scale PV solar panel and battery manufacturers
 - AMP Nova, BYD, Tesla, LG Chem, Samsung SDI, CATL, Panasonic, Fluence
- Modular thermal solar+storage startups
 - Market shares are small compared to PV+battery
 - 247Solar, RayGen, Vast Energy, Heliogen,
 - Like Exowatt, but without the BS

NOTE: Major solar+storage project developers are our *customers*, not our competitors

- e.g. NextEra, Vistra, Silicon Ranch, Equinix, Infracore, ...

6-year Financial Plan

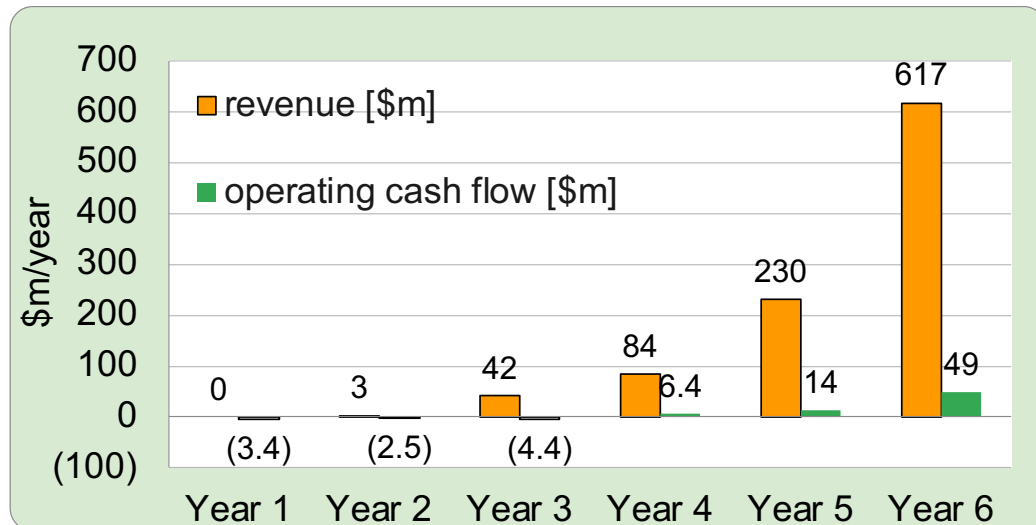
Less than \$25million investment before positive cash flow.

Here's how:

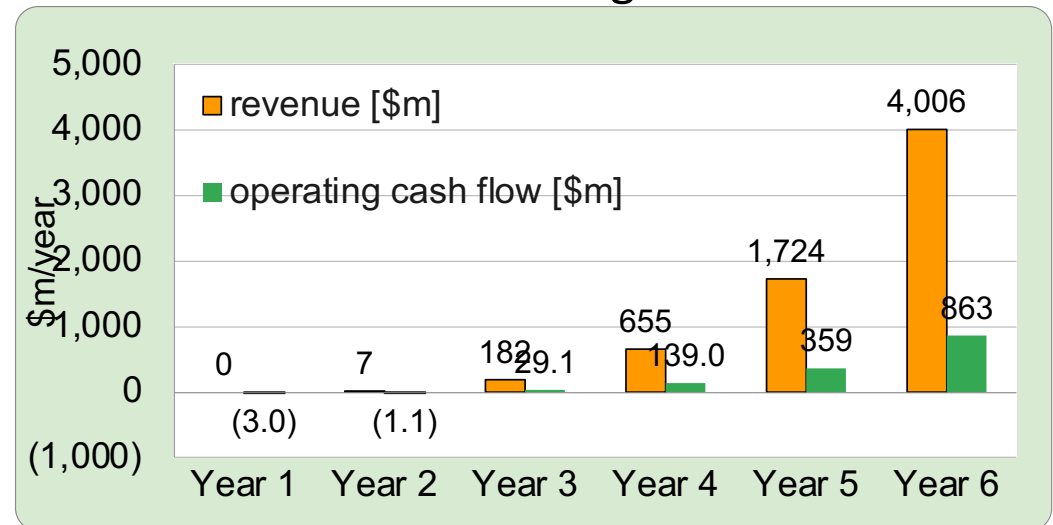
- No gigafactories: assembly equipment payback in weeks not years
- Project finance pays for work in process
- Profitable and positive cash flow from first projects post-pilot



Baseline Plan



Feasible Target Plan



Team: experienced, competent, complete



Terrajoule Energy Inc.

- breakthroughs: hydrothermal storage & prefabricated solar concentrator
- rigorous performance validation



\$0.5B exit

Steve Bisset
CEO, Director, Co-founder



Jim Bochnowski
Director, Advisor, Investor



John Townsend
VP Strategy



>\$0.5B /year revenue

Dr. Ashok Bakhavathsalam
Managing Director



Dr. S.P. Viswanathan
President



Roop Karihaloo
VP Business Development



Andrew Murdoch
Chief Engineer



Neill Laurenson
Project Director (Australia)



Dr. Suresh Kumar
Executive VP, R&D Director



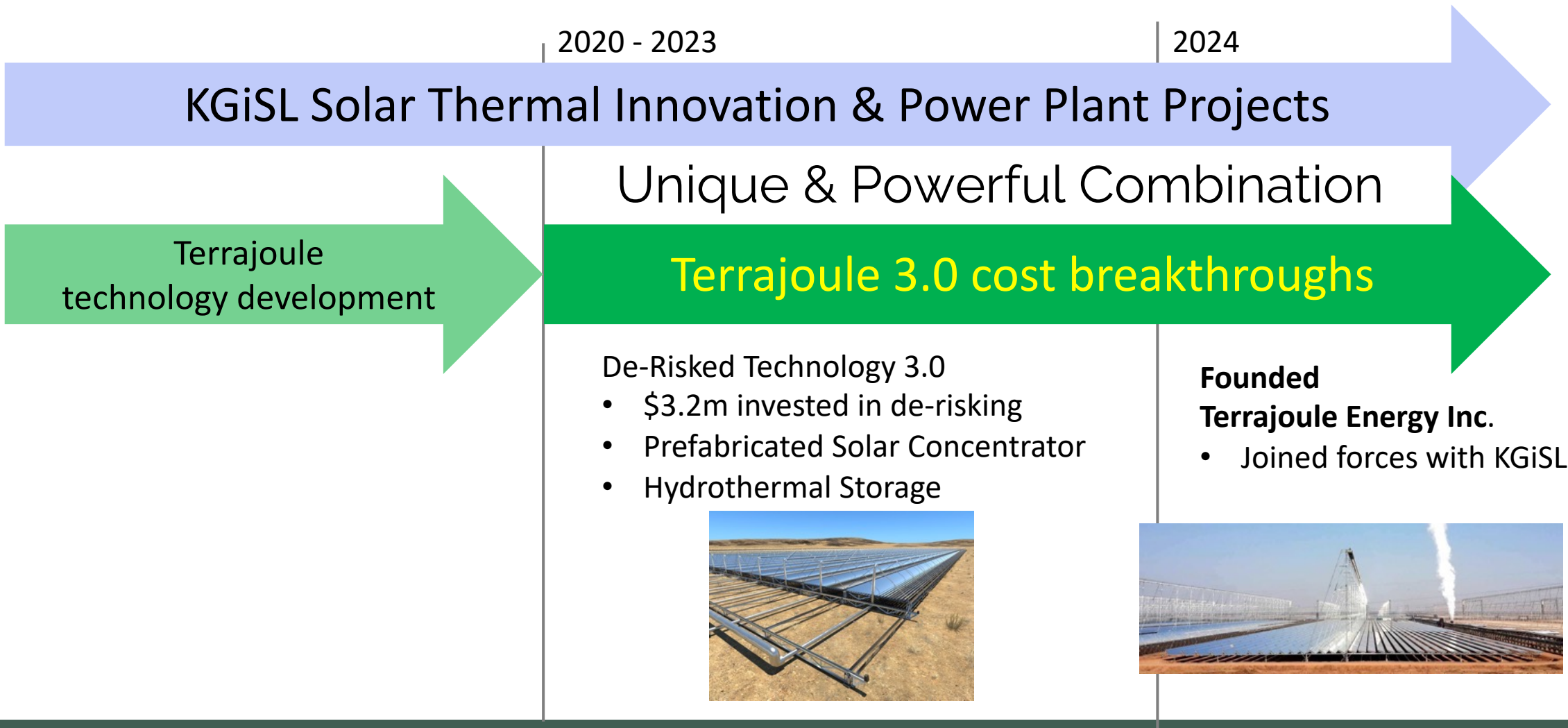
Shinu M. Varghese
VP Technology

<https://www.terrajoule.energy/team>

<https://solar.kgggroup.com>

Status: pre-revenue, validated technology, no tech risk

Our journey: Market-driven *innovation* and project execution *experience*



Funding: \$5m to market-ready product in 18 months

\$5m Series A funds market-ready electric power station in 18 months

- First tranche \$1.5m (seed round) funds dispatchable heat pilot in 12 months – ready for gas extraction and industrial heat applications
- Second tranche \$3.5m funds complete electric power and waterless cooling pilot in another 6 months, ready for data centers

\$10m - \$20m Series B to support initial market launch costs

- **No Series C**, no additional dilutive investments
- Fast, cashflow-positive ramp up to multi-\$B revenue

We will increase the speed and scale of the clean electricity transition
without burning billions.

Exit

1. Build a valuable company
 - ➔ rapid profitable growth, positive cash-flow, up-and-comer in a huge market
2. Cash-positive high growth will yield ***multiple exit options***:
 - IPO
 - Acquisition is optional, *not required* for scale or market penetration:
 - Project developers, oil & gas companies, energy equipment companies
 - Our investors will choose the liquidity path

The Investment Case

Data centers are growing much faster than the grid can support them.

While others build batteries that only solve half the problem,
or nukes that will miss the bus by years,
Terrajoule solves both power AND cooling with technology
that's deployable at *scale*.

The market isn't just big - it's desperate. We have the solution.

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