

Elements of an Investor Pitch

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Energy 203: Stanford Energy Ventures

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STANFORD
UNIVERSITY

My Background

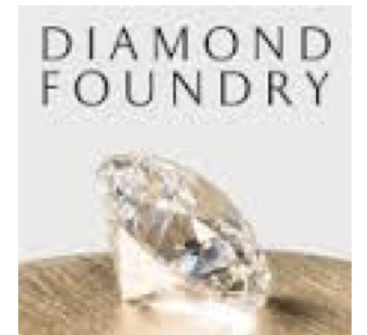
- **Venture Capital**



- **Government**



- **Company Executive and Advisor**



What are investors looking for?

The three most important aspects:

- **Market**
 - Big market (\$1B+), growing fast (>10%+ *p.a.*)
 - On trend – “tailwinds, not headwinds”
 - Right timing – at inflection point
- **Technology**
 - 10X better, faster, cheaper
 - “Disruptive”, not incremental
 - IP or other barriers vs. competition
- **Team**
 - Serial entrepreneurs with track record of success
 - (Often founding team is technologists not entrepreneurs, but ideally have track record of commercializing)

→ Potential for \$100M revenues by Year 5 (and \$1B valuation possible)

The Investor Pitch – context

- Tell a story
 - What's the “through line”?
 - One main point per slide
- Know your audience
 - Where are they in their learning curve?

For in-person presentations:

- Listen and learn
 - Listen closely to questions
 - Use the opportunity to learn
- Build a relationship
- Grow your network

The Investor Pitch – context (continued)

Different types of pitch for different stages of investor interest:

- First Contact Elevator Pitch (*60 secs*)
(“In a world where...”)
- Possible Interest Teaser / Executive Summary (*1-2 pages*)
Overview Presentation (*8-12 slides*)
- Declared Interest Detailed Presentation (*~20 slides*)
(In person vs. by e-mail)
- Due Diligence “Data Room”

Investor Presentation Outline

(1) Overview

- Company Overview
- The Problem

Big, exciting – but clearly defined – vision
Critical market need / pain point

(2) Technology

- The Solution
- The Product
- Competition & Differentiation

Technology that's 10X better, faster, cheaper
Clear, compelling customer value proposition
Highly differentiated / unique vs. the competitors

(3) Market

- Market
- Market Traction
- Go-To-Market Plan

\$1B+, fast-growing market
Demonstrated traction with customers, partners, validators
Clear plan and method of acquiring customers

Investor Presentation Outline (continued)

(4) Team

- Management Team Experienced entrepreneurs with a track record of success (Or founding team with solid technology experience)

(5) Financials

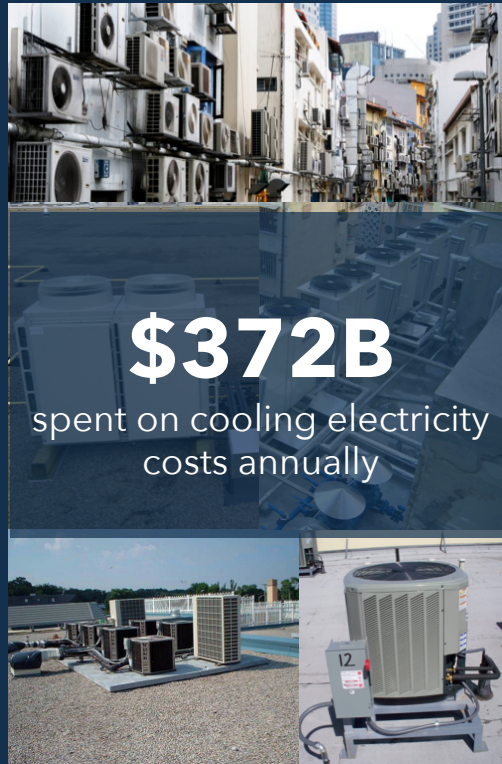
- Economics 50%+ gross margins
- Financial Projections \$100M revenues and cash flow positive by Year 5
- Funding Appropriate level of funding for the right uses
- Milestones Clear timeline and plan; clear outcomes and risk reduction path
- Exit & Returns Potential for investor to earn 10-20X returns

Sample Company



Company Overview

Our vision: Improve the efficiency of all cooling & refrigeration systems



The Problem

Critical market need / pain point?

Cooling and Refrigeration are a Central Part of the Energy & Climate Challenge

15% of electricity used globally is for air conditioning and refrigeration

10x growth in electricity used for cooling by 2050, driven by increased use in developing world

1 Gigaton of CO₂ emissions emitted annually worldwide due to cooling systems (10% of global CO₂ emissions)



Refrigeration is a Major Pain-Point for Our First Customers: Supermarket Owners

60% of electricity used in a supermarket is for refrigeration

\$200K/yr
electricity costs

24/7 refrigeration systems are on all day, year round

1% profit margin



same as energy costs!

Regulatory standards (CA Title 24) & Sustainability goals

The Solution

Is the technology/solution 10X better, faster, cheaper?

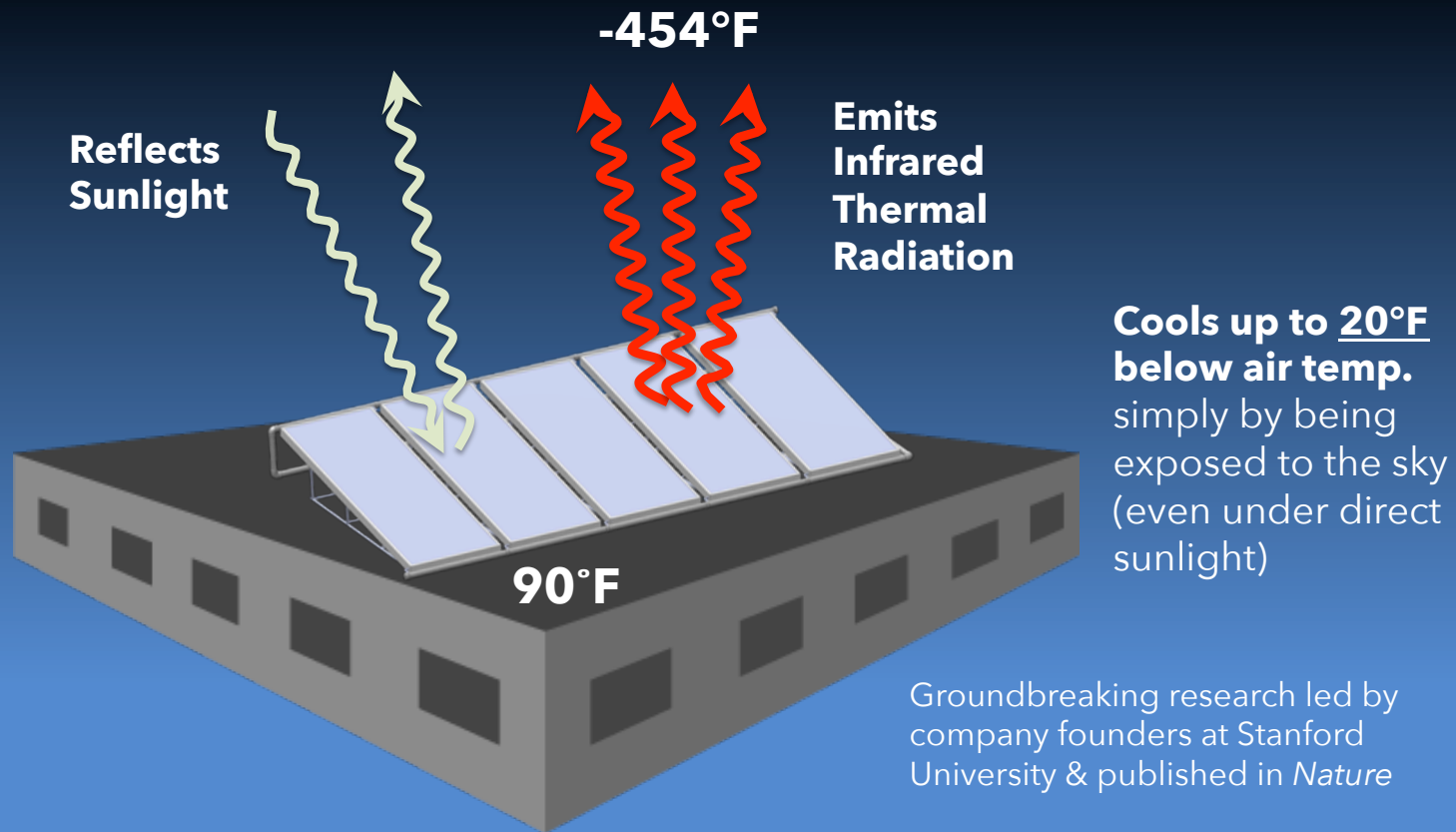
- Technology overview
- Technology development status and plan
- IP – FTO and ability to block

- Common Issues:
 - Incremental improvement
 - Too early: “science project” (TRL 0-1)

The Solution

Nanoscale photonics for sky cooling

Core Technology: Zero Electricity Cooling Panel That Sends Heat to the Cold of Space



Groundbreaking research led by company founders at Stanford University & published in *Nature*

The Solution

Nanoscale photonics for sky cooling

Sky cooling was not possible during the day until now

**Reflect
Sunlight**



**Radiate
Heat**



Sky Cooling Surface

Sun:
1000 W/m²

Thermal Radiation to the Sky:
50-150 W/m²

Solar absorption by the sky facing surface overwhelmed any cooling effect during the day

The Product

Does the product have a clear, compelling customer value proposition?

- “Product-Market Fit”
- Customer Value Proposition
- One focus, with upside opportunities
 - “Platform technology” vs. “one-hit wonder”
 - “Insurance”
- Common Issues:
 - Not clear on specific target customers and value proposition
 - Change is required in customer behavior, process, value chain
 - Long payback time (> 2 years)

The Product

Our Product: Fluid Cooling Panels



Cools fluids such as water up to 20°F below air temperature

Prototypes in testing since 9/2015 at Stanford University

Validated / Peer-Reviewed:

Nature publication (2014)

ASHRAE publication (2016)

PNNL (DOE) Third-Party Study - No. 24904 (2015)

Intellectual property: Two broad composition of matter patents that cover this approach to cooling (negotiating an exclusive license)

The Product (Value Proposition)

SkyCool's Value Proposition for Supermarket Owners

For a median U.S. supermarket, typically **40,000 ft²**, our installation will cover **20%** of the roof (8,000 ft²) at a net installed cost to the customer of **\$112K**.

225 MWh

Electricity Saved Annually

\$30K

Cost Savings*

\$3M

Sales equivalent

(Calculations based on hot, dry climate)

Payback	< 4 years
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IRR	19%
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Lifetime NPV (20 years)	\$240K
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*Excludes utility incentives, 0.13\$/kWh



Panel pricing:

Our revenue (at 50% gross margin):

\$5.50/ ft²

Channel markups & installation costs:

\$8.50/ ft²

Cost model based on producing 500K ft²/ year. Developed with the assistance of leading thin film manufacturers, consultants, refrigeration equipment integrators.

Competition & Differentiation

Technology and product are highly differentiated / unique?

- Who are the competitors?
- Why is your tech/offering different, better?

→ Demonstrate a thoughtful understanding of the competition

- Common Issues:
 - “No competitors”
 - Dismissive of competitors
 - “Me too”

Competition & Differentiation

Competitive Landscape

Evaporative
Cooling



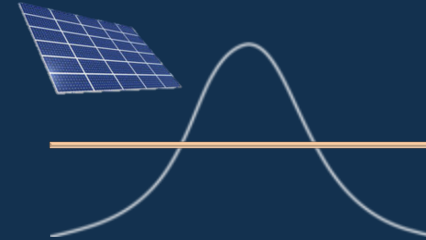
High water usage,
expensive maintenance for
fouling & complexity -
SkyCool is a closed loop
without the maintenance &
water costs

Thermal Storage



Thermal storage shifts
loads - SkyCool improves
efficiency throughout the
day

Photovoltaics



SkyCool saves more energy
and more money per roof
unit area for refrigeration,
which needs electricity
24/7

Market

\$1B+, fast-growing market?

- What's the target market?
 - Addressable market size? Growth rates?
 - Entry market vs. future market segments?
- Does this market support a \$1B+ company?

Common Issues:

- Lack of clarity on target market segments / true addressable market

Market

Large Markets Ripe for Disruption

Beachhead

Early-Entry

Long-term



Commercial Refrigeration

\$33B

market

9.1%

CAGR



Data Center Cooling

\$12B

market

13.6%

CAGR



Commercial Building A/C

\$50B

market

7%

CAGR

Go-To-Market Plan

Clear way to acquire customers?

- Which customers / market segments, in what order?
- Three key factors:
 - How reach customers
 - Customer acquisition cost (CAC)
 - Sales cycle
- Distribution partners, channel partners?
- Business Model? (What are you selling, to whom, and how do you get paid?)
- Common Issues:
 - Direct sales – “reinventing the wheel”
 - Long sales cycle (6 months +)

Go-To-Market Plan

Business Model: Panel System Sales

To reach our end-customers, we will sell our panels through existing commercial refrigeration system integrator sales channels:



Long-term vision: Finance purchases cost through Energy Savings Performance Contracts (ESPC) to reduce first-costs to customers and grow our market share

Market Traction

Already showing progress with customers, partners, and validators?

- Show “market traction”
 - Funding partners (seed investors, government funders)
 - Customers and sales pipeline
 - Technology development partners
 - Other partners: Distribution partners, Channel partners, Strategic partners
 - Competitions and Prizes
- Common Issues:
 - No evidence of customer or partner interest

Market Traction

Current Funding & Status



\$640K Award
ARPA-E (U.S. DOE)



\$30K Tech Transfer Award 2016



\$5K FLoW
Cleantech Business Plan
Competition (2nd Place)



Urban Clean Energy Prize 2016

\$15K - Member of Fall 2016 Cohort at
Accelerator



- Two dominant players in supermarket refrigeration are strongly interested in testing our system. Leading supermarket chains evaluating our performance for potential pilot tests.
- Pursuing pilot opportunities: utility-supported test on a regional supermarket; competing to be in *MarketZero* - CEC-supported zero net energy supermarket in SF
- Engaged with a leading Bay Area Tech Company to assess utilization in a Data Center Application (secondary beachhead market opportunity)
- Finalist for PRIME Coalition's 2016 funding cycle

Economics

50%+ gross margins?

- Unit Costs
 - Cost of your product / service – based on detailed cost model, supplier quotes?
- ASPs and Gross Margins
 - 50% typical for tech hardware / 85% for software, biotech
- Cost reduction path?
- Common issues:
 - Low margins (e.g., 20%) delay cash flow breakeven and reduce exit multiples
 - *Negative* gross margins / difficult cost reduction path
 - Dominant tech cost reduction

Financial Projections

\$100M revenues and cash flow positive by Year 5?

- 5-year P&L projections
 - Bottom-up vs Top-down revenue projections (the 1% fallacy)
- Headcount projections
- Timing to cash flow breakeven
- Capital investment needed until cash flow breakeven

Funding

Appropriate level of funding, for the right uses?

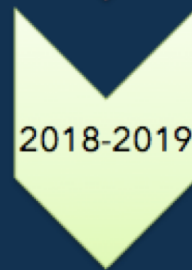
- Funding history
- Capital needs – target amount to raise
- Use of funds / Success milestones
 - Technology development – e.g., field beta trials
 - Fastest time to market / MVP / market and customer feedback?
 - Market/Commercial development – acquiring customers, partners
 - Team development – Key Hires
- Common Issues:
 - Raising too much or too little to get to next set of milestones
 - Capital-intensive business model

Milestones

Company Plan



- Complete cooling system efficiency improvement demonstrations and prepare for first customer pilots
- Secure first pilot opportunities and solidify customer leads in early-entry market (commercial refrigeration)
- First sales commitments



- Deploy first pilot demonstrations in target market (supermarket refrigeration)
- Establish sales channel/OEM agreements
- Hit \$1M in revenue from first 10-20 installations by end of 2019
- Pilot technology for expansion in broader space cooling market



- Scale to broader cooling market, grow to \$100M/year
- Secure strategic partnerships with cooling system manufacturers
- Exit opportunities: Partnership or acquisition by major HVAC/refrigeration manufacturer, or solar manufacturer (as a complementary technology)

Exit & Returns

Potential for investors to earn 10-20X return?

- Exit examples
 - Exit types: IPO? Acquisition? Licensing?
 - Comparable company exit valuations
- Return multiple
 - Exit valuation based on comparables – using projected EBITDA in year 5
 - Return Multiple vs capital invested

Common Issues:

- No M&A or IPO activity in sector

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