

SOLJEL

Highly-efficient, Vaseline-based, Solar Panel Cooling System

Problem Statement

Despite leading the renewable energy sector, solar panel still struggles with inefficiency that resulted from thermal radiation

39%

of total new US electricity generating capacity

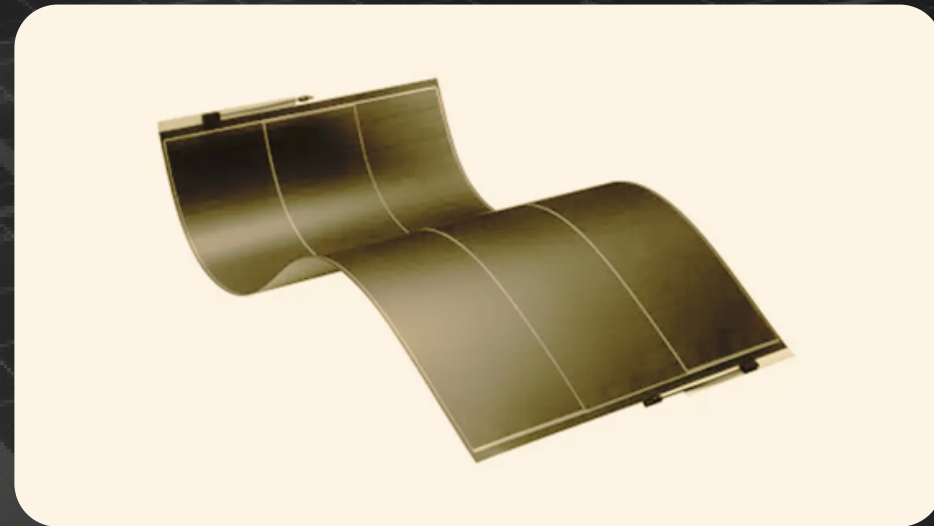
11-15%

Average efficiency of solar panel

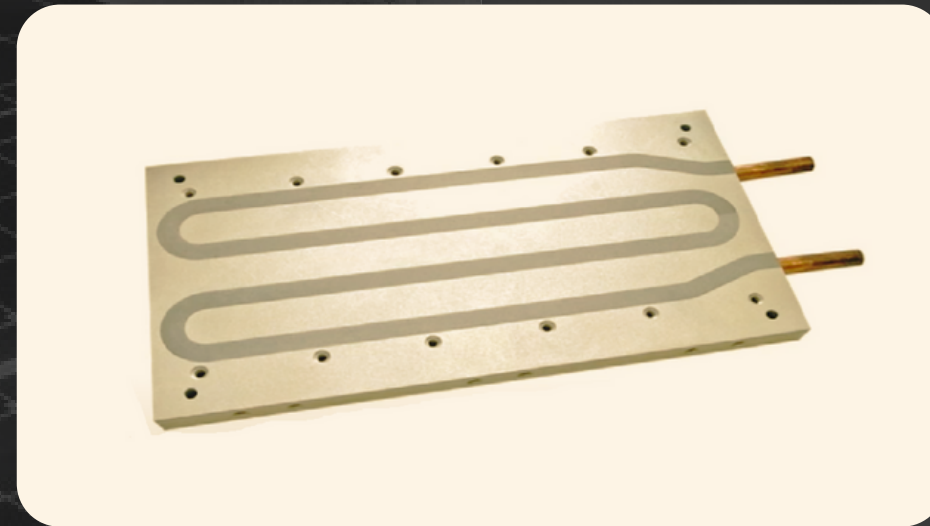
10-25%

Decrease in solar panel efficiency as temperature increase above 25 °C

Problem with Current Cooling Solution



Thin-Film
Rare, Toxic



Alum. Jacket
Expensive



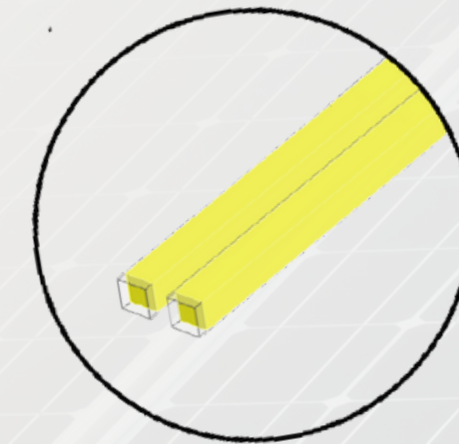
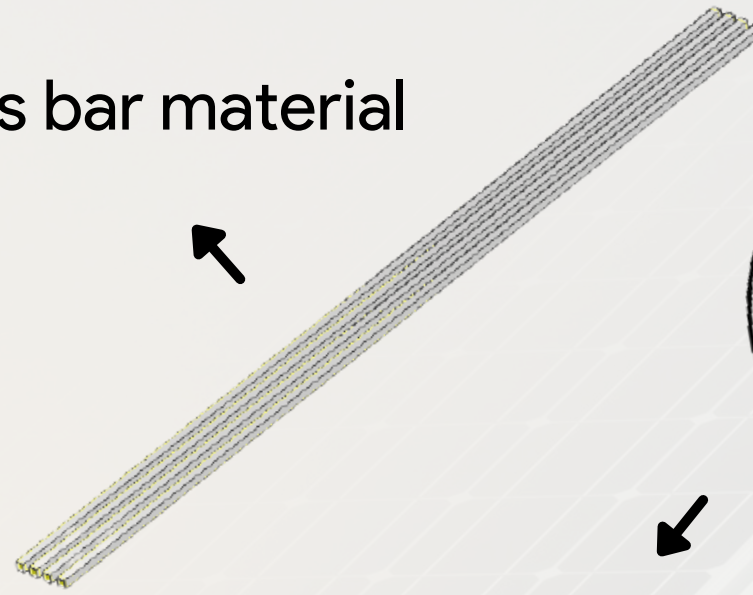
Water Spray
Wasteful, Inefficient

Proposed Solution

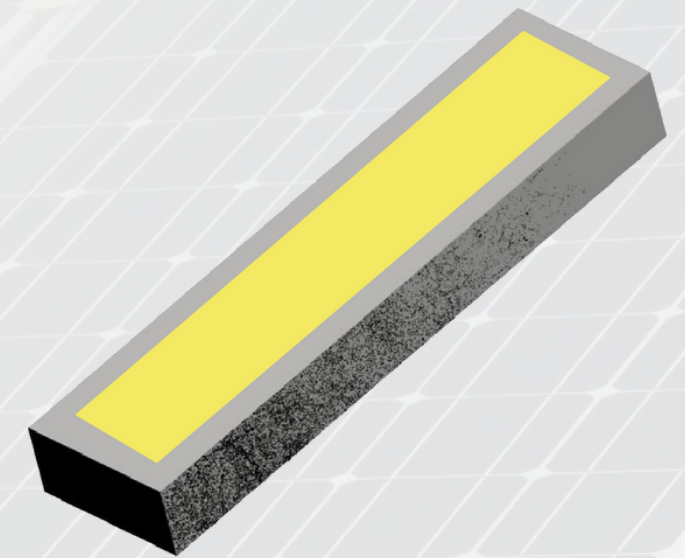
SolJel (Solar Jelly)

Soaks heat during the day, release by night

Aluminium as bar material



SolJel (Vaselineum Flavum)



Reduce
8-15%
efficiency
decrease

Long lasting
up to
40 y.o
system
resistance

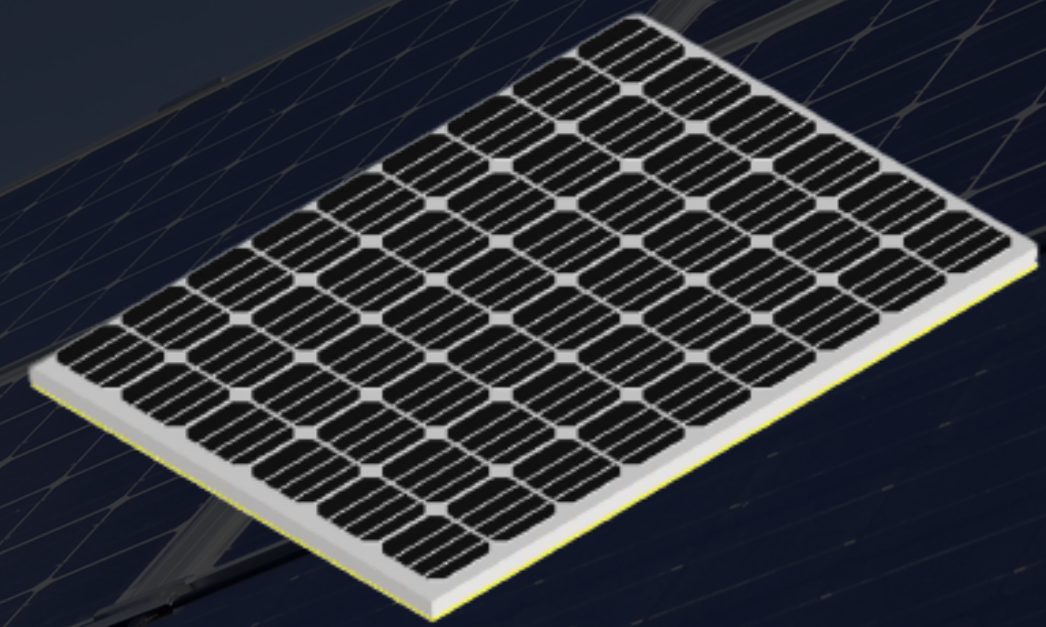
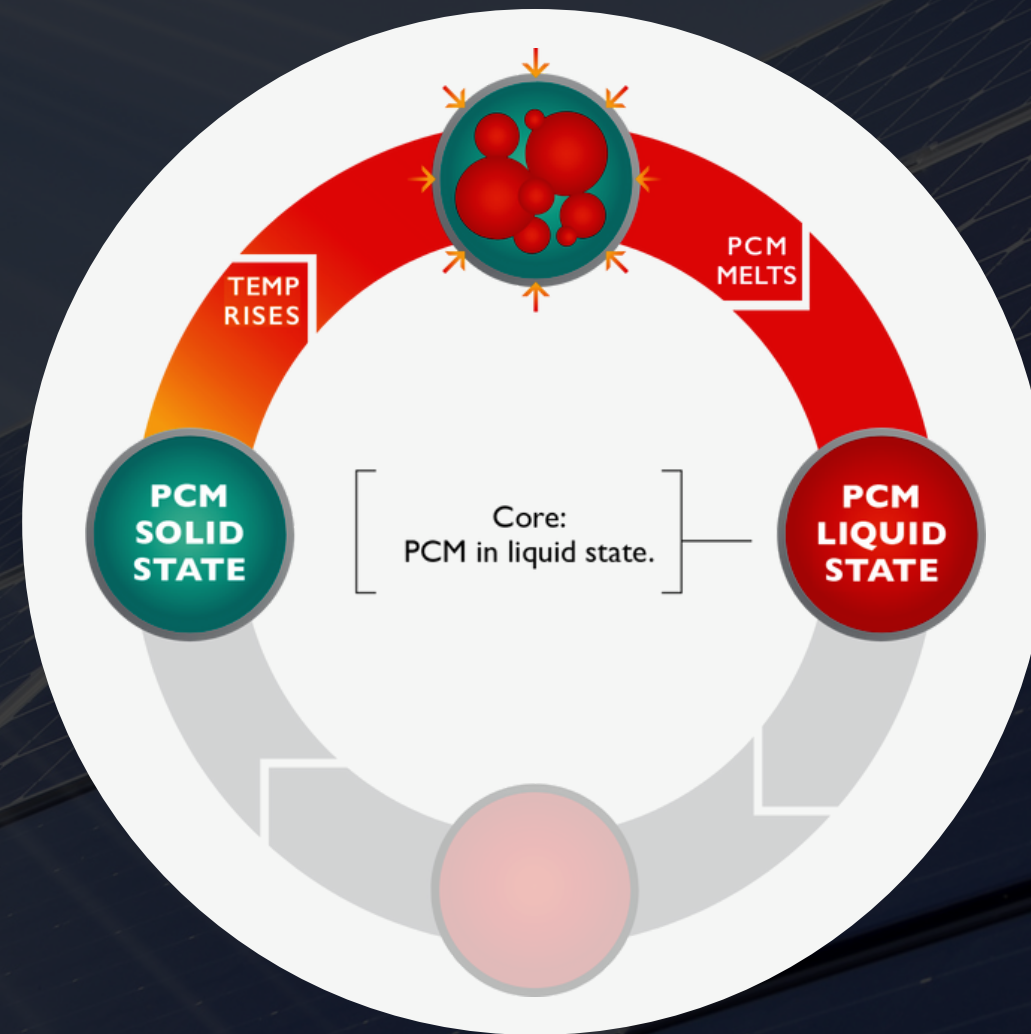
19%
cheaper in
electricity bills

a complementary product of a solar panel system utilizing **Phase Change Material (PCM)** as the passive cooling system

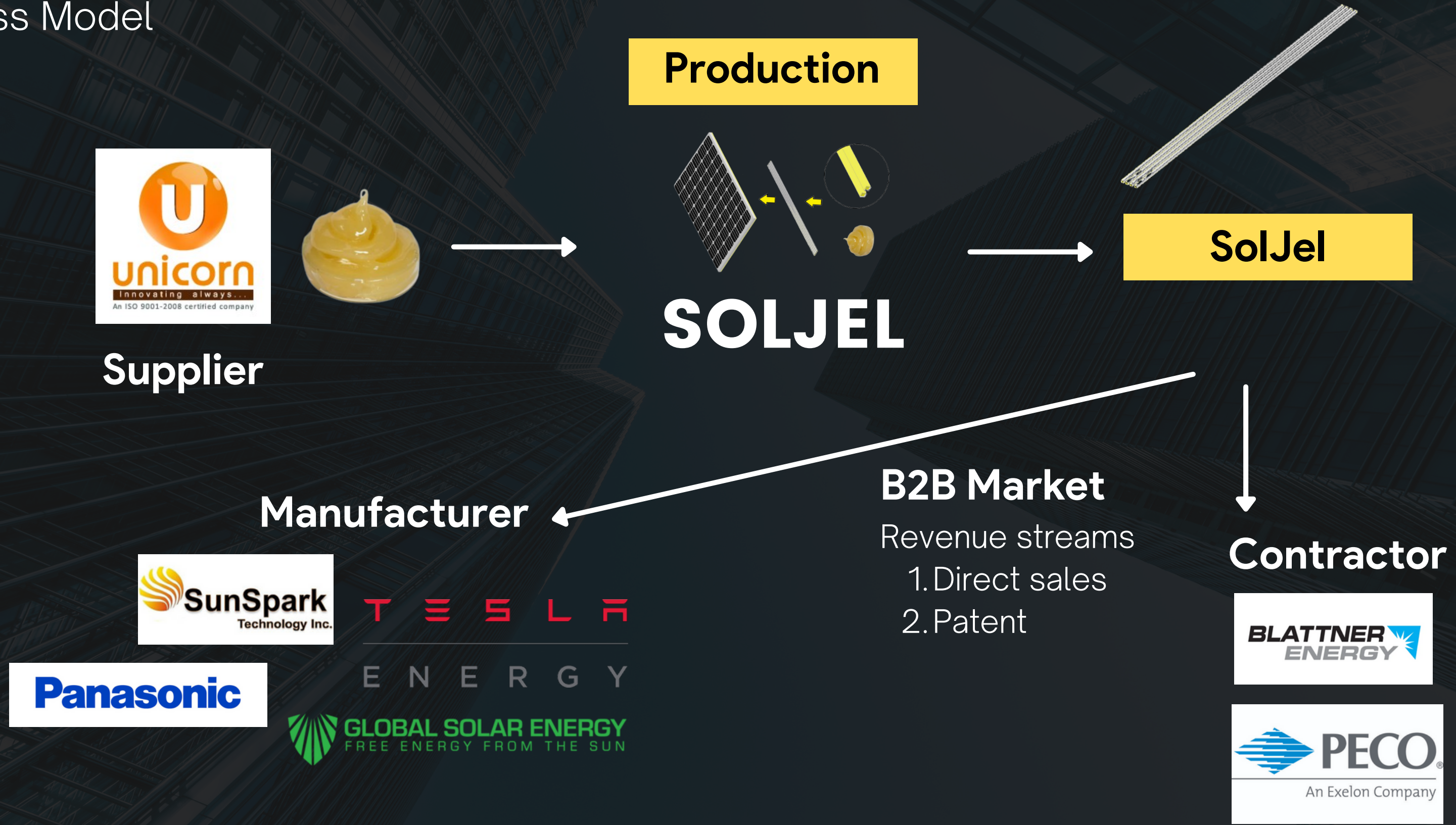
Mechanism

Customizable PCM-filled Bar Fit to different solar panels

An organic-based PCM (vaseline etc) was selected and compositionally mixed adjusting the operating temperature on the site.



Business Model



Market Size

TAM

3 Million

Solar panel installed
across the US

seia.org

SAM

33%

987 k

Solar panel installation
based in California

EIA

SOM

1% Market Share

9.87 k

Soljel cooling
system usage



Impact Generated

EARTH

Saving
3.7 Mto/yr
of greenhouse
gas emission
compared to
regular grid
*2205 Unit/year

SOCIAL

Providing
1.000
new jobs to
Contribute
reducing climate
change by 2030

ECONOMIC

Reducing
14%
cost of
electricity (LCOE)
after 30 years of
usage

Milestone



Financial Projections

26%

Return On Investment

2026

Payback Period

28%

Annual Sales Growth

Team



Nailah Shabirah
SAS'25
Entrepreneurship



Josiah Enrico
SAS'25
Mechanical Engineering



Firdausa Amilia
SAS'25
Management



Fauzia Hafida
SAS'25
System Engineering



THANK YOU