

Green Economy:

Actions to Achieve Net Zero while Growing Business



What is The Green Transition ?

The Green Transition is an Energy Transition

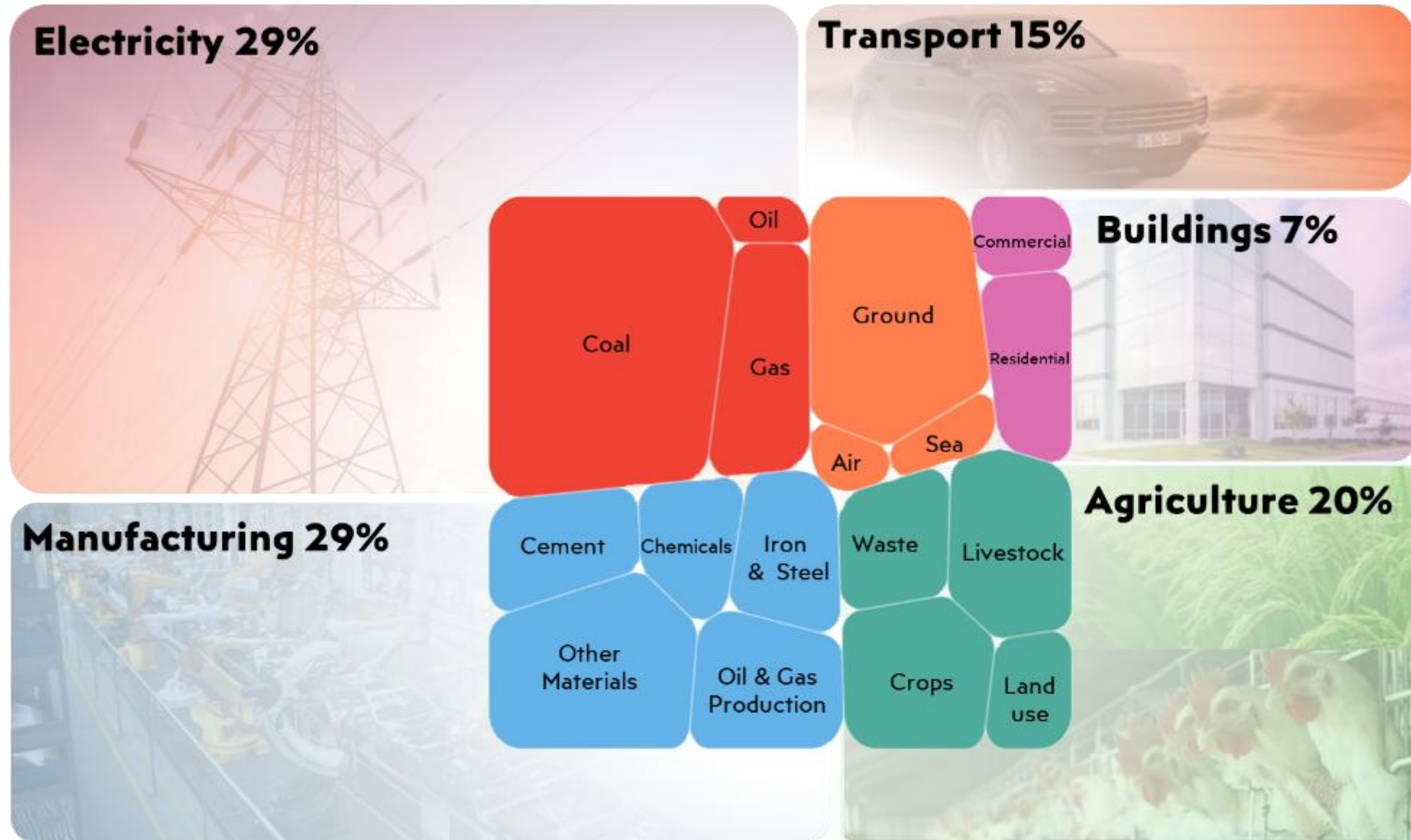
Things
we use

Things
we make



Things we eat

Where do all the emissions come from today?



Where our (Thailand's) energy comes from and your personal footprint...

IEA: Thailand Energy supply (2022) – total energy fuel + electricity



81% Fossil Fuels

250
Million tons CO₂

3.5

Tons CO₂ emissions per capita in Thailand

**58kg CO₂
to manufacture**

**10kg to charge
over the life of
the device**



More energy = more prosperity

Per capita electricity generation vs. GDP per capita, 2023

Our World
in Data

Average annual electricity consumption per capita, measured in kilowatt-hours¹ per person. Gross domestic product (GDP) per capita is adjusted for inflation and differences in living costs between countries.

Per capita electricity use (kilowatt-hours)



Data source: Ember (2024) and other sources

OurWorldinData.org/electricity-mix | CC BY

Note: GDP data is expressed in international-\$² at 2021 prices.

Why should Thailand change?

Because it can and it makes good business sense... Thailand vs the US



**CO₂ emissions
from fuel combustion**

Total, 2022

250 Mt CO₂

Trend

↑ 63%

change 2000-2022

0.52

**GHG Emissions
(Mt CO₂)/GDP (Billion USD)**



**CO₂ emissions
from fuel combustion**

Total, 2022

4,608 Mt CO₂

Trend

↓ 20%

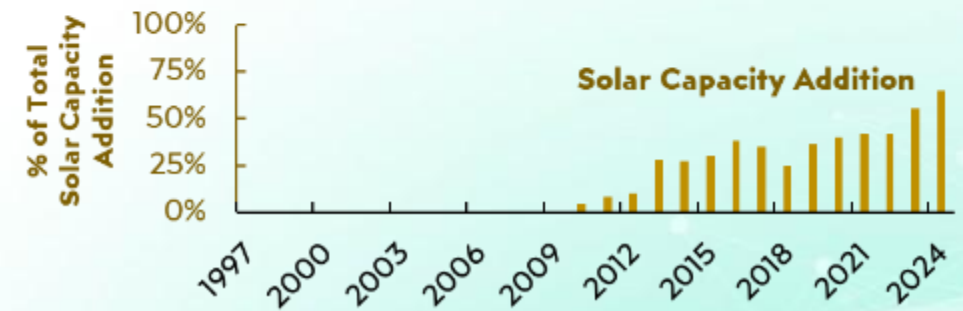
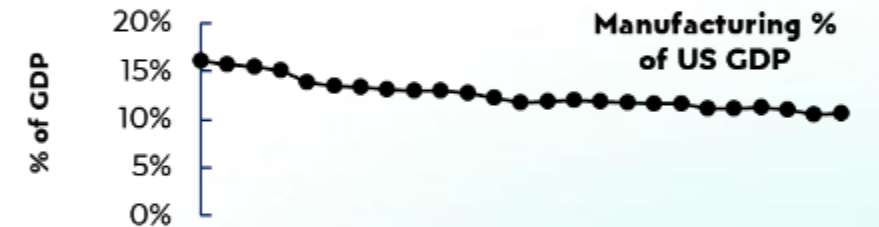
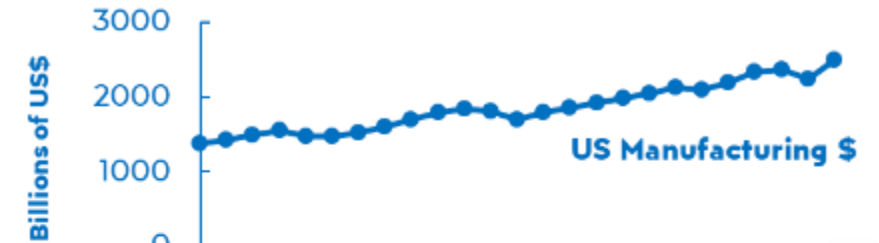
change 2000-2022

0.17

**GHG Emissions
(Mt CO₂)/GDP (Billion USD)**

The US still makes things...

And is adding more solar...



Source: bea.gov, tradingeconomics.com, statista.com, & macrotrends.net

CBAM & Carbon Tax are policies to drive change...



Climate Crisis

- The world's first Global Stocktake, published by the United Nations, takes a detailed look at climate action progress.
- The world has failed to limit temperature increase to within 1.5 degree Celsius, urgent need for accelerated action to reach climate goals.
- Business can not survive, if the world can not survive.

DOUBLE DOWN, TRIPLE UP
THE WORLD NEEDS 3x RENEWABLES



Carbon Tax

- Cost of doing business will be increased due to carbon tax policy in many countries
- **Singapore's carbon tax** was raised to S\$25/tCO₂e with effect from 2024. It will be raised to S\$45/tCO₂e in 2026 and 2027, with a view to reaching S\$50-80/tCO₂e by 2030.
- **CBAM**: prevent carbon leakage in EU by imposing a carbon price on imported products with targeted industry namely steel, cement, electricity, and fertilizer

Geopolitics & Trade War can slow down green transition

- Trump administration won't create policies to support renewables; however, the US is a complex market place.
- Solar in the US grew under the Trump 45 administration.
- States, cities and businesses in the US will still meet green transition investments





**How can my company
navigate the change?**

FEAR:

*If I change my business
will suffer ...*

DOUBT:

*I don't think changing
can make a difference ...*

*The technology isn't
ready or right for my
business*

UNCERTAINTY:

*I don't know how to start or
where to get help ...*

How Can my Company Navigate the Change ?

1: Utilities

How much you use
Where to change to
renewables



Coal, Oil, Gas



Electricity



Water

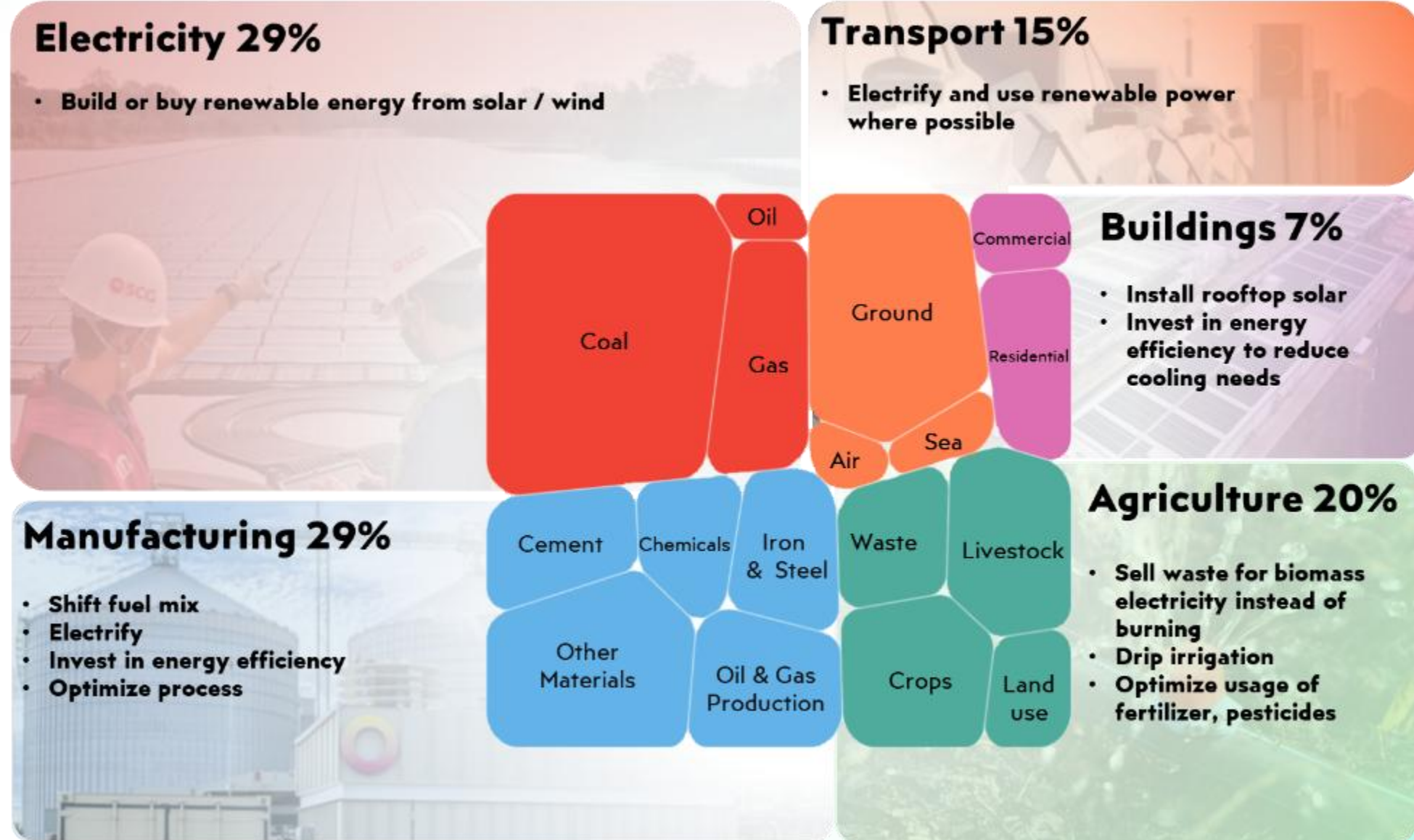
2: Process

How to change
your process steps
and inputs



**Green products through
new processes**

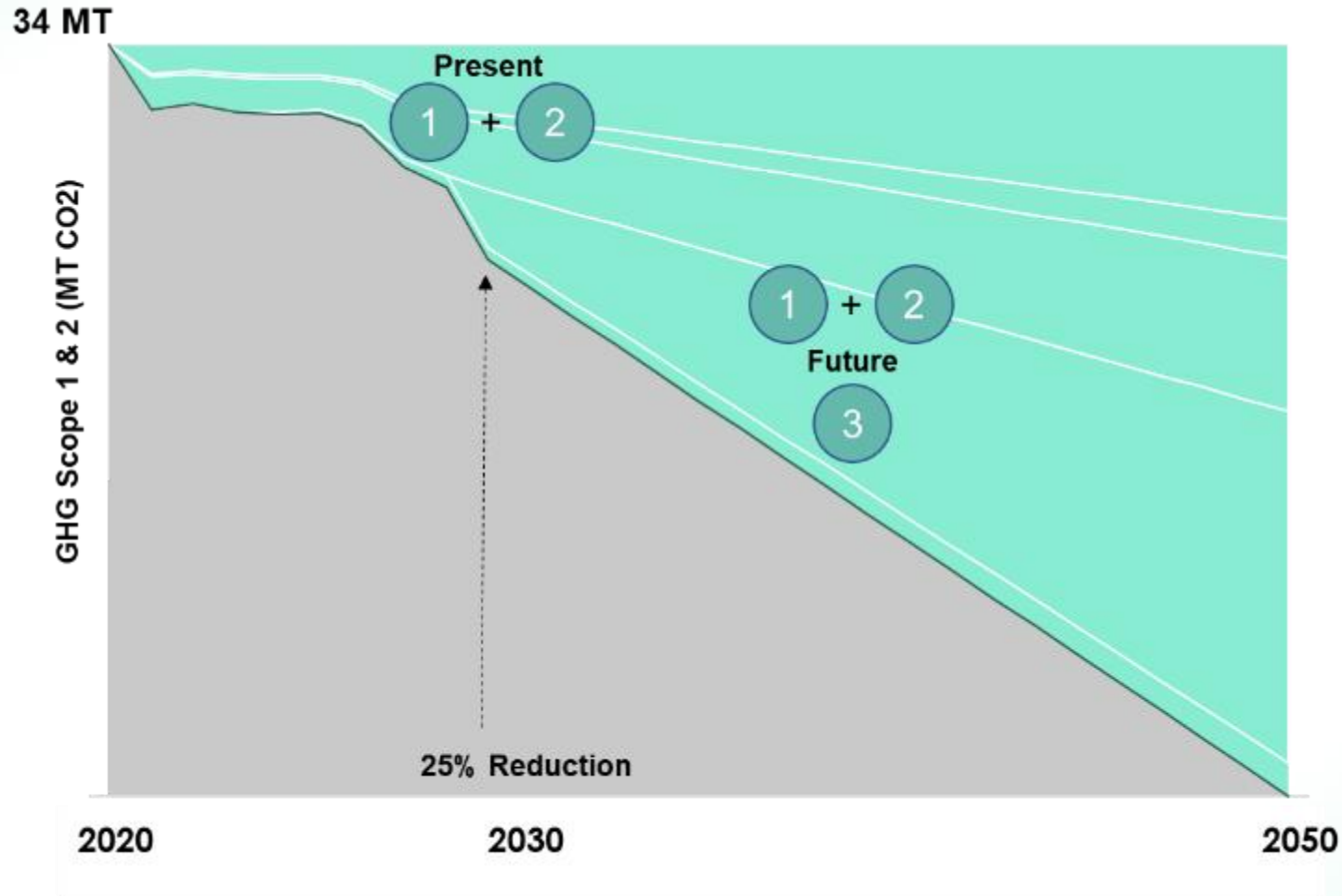
Example projects that can generate returns now in each sector



How is **SCG** Accelerating The Change ?



SCG Net Zero 2050 Roadmap



- 1 Energy Efficiency & Transition**
By exploiting state of the art technologies to improve energy efficiency and increase proportion of renewable energy
- 2 Low Carbon Product & Process**
By Innovating the products and processes with circular economy principle and low carbon technologies in value chain
- 3 Carbon Capture Utilization & Storage (CCUS)**
By developing and scaling up Carbon Capture, Utilization & Storage technology with national and global collaboration

Others

Carbon Offsetting

- **Natural Climate Solution (NCS)** By collaboration with communities to forestation & rehabilitation on carbon sink
- **Carbon Removal** By removing GHG from the atmosphere to achieve Net Zero balance

Example: How we have lowered the CO₂ footprint of cement by more than 50kg per ton

1: Utilities

How much you use
Where to change
to renewables



Coal, Oil, Gas

All Gen:
Reduce Coal
use by ~26% by
replacement with
biomass

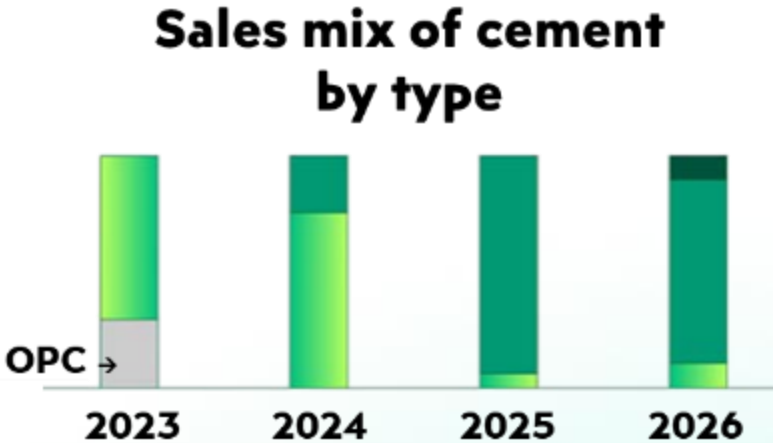


Electricity

All Gen:
Reduce Electricity
use by ~38% by
utilizing waste heat
recovery

%CO₂
Reduction
(Compared to OPC)

Gen 1	10%
Gen 2	15-20%
Gen 3	40-50%



2: Process

How to change your
process steps and
inputs



Green products through
new processes

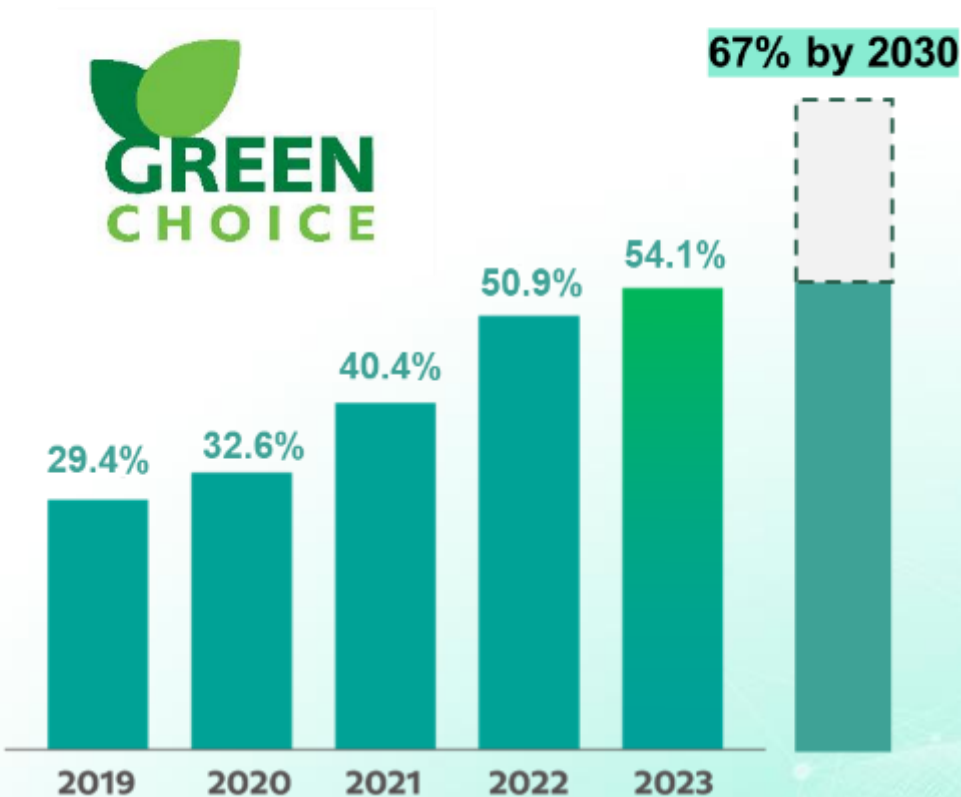
- Gen 1: Replace clinker
- Gen 2: change Supplementary Cementitious Material (SCM)
- Gen 3: more input changes



Green Innovations are Growing in Demand



%Revenue from Sales Target by 2030 of SCG Green Choice Products and Services



Go far together



Green Logistics



Green
Polymer

LION



Green
Agriculture



Sustainable
Packaging



日本製紙グループ
NIPPON PAPER GROUP



Energy
Transition



And many more.....

Stop Reinvent, Start Open Collaboration



SCG Deep Technology Investment Team engages with innovative companies to build future business for SCG...



Investment key themes aligned to SCG's businesses:



Packaging industry



B.Mat / construction industry



Chemicals industry



Logistics industry



EV industry



New energy industry

And more...

Examples:



- **Heat storage to deliver on-demand heat supply** and carbon reduction
- To scale up with SCG as a thermal media supplier



- **Ultra high efficiency solar panel**
- Potential scaling up scenario includes manufacturing of panels



- Adapted **enVerid system from the U.S. to SCG Air Scrubber**, an air quality and energy management system

How Can **SCG** Help my Company ?

SCG Cleanergy:

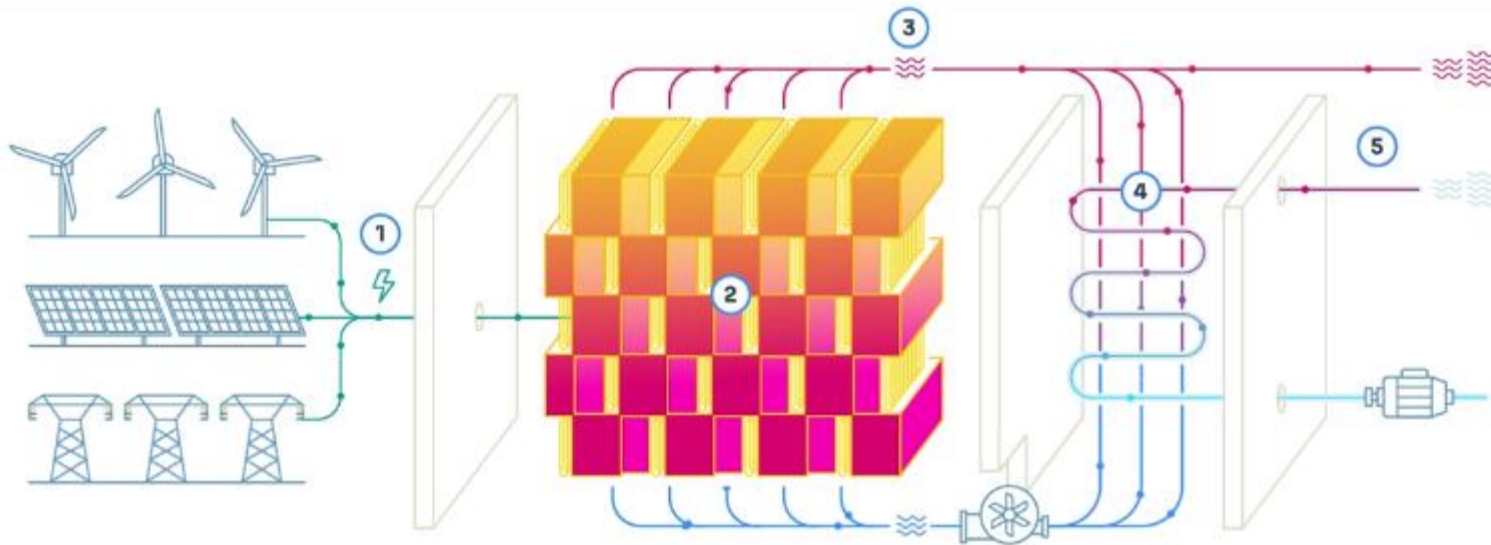
save costs and decarbonize with fully integrated solar solutions.



CubicPV advancing solar to create the highest solar efficiency and the lowest cost of electricity



**Powering Industry with Clean Heat
with the World's highest efficiency of Heat Battery "Rondo".**





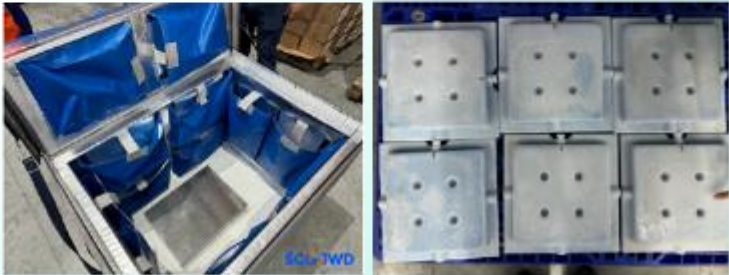
Lowering Your Energy Bills with Pioneering Energy Efficiency Solutions.



enVerid Systems cuts energy use and costs by up to 30% while improving indoor air quality.



PCS: save 15-20% on Energy Costs in Cold Chains.



Go Green & Grow Together



An aerial photograph of a city skyline, likely New York City, with a dense cluster of skyscrapers in the background. In the foreground, a large, lush green park with a winding lake is visible. The sky is a vibrant blue with soft, wispy clouds. The overall image has a bright, sunny, and optimistic feel, with a color palette dominated by blues, greens, and yellows.

Inclusive Green Growth