

Roxanna Delima, CEO
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Oct 2026

Name: Andrew
Title: Water Resource Division Manager
Location: Bay Area, California






Bleach Price ($/gallon)
$0.70
$1.44
$2.69
$3.27
$3.31
300%
2021
2022
2023
2024
2025

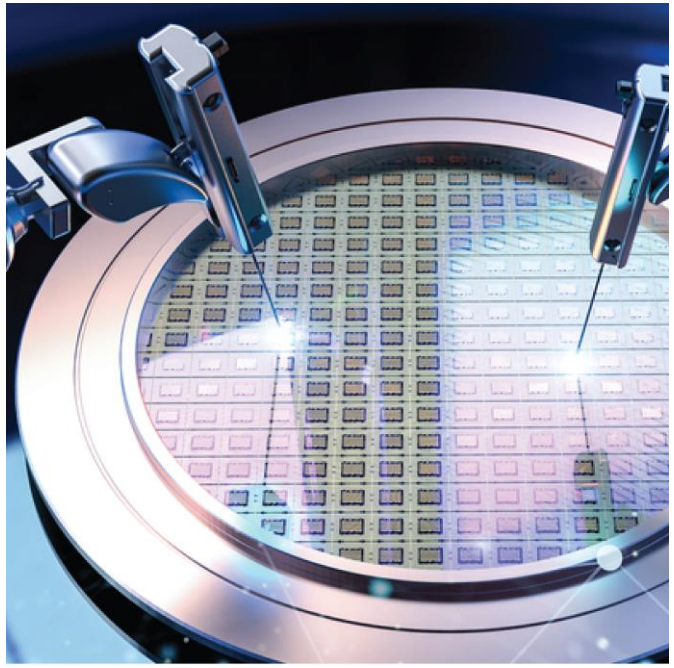




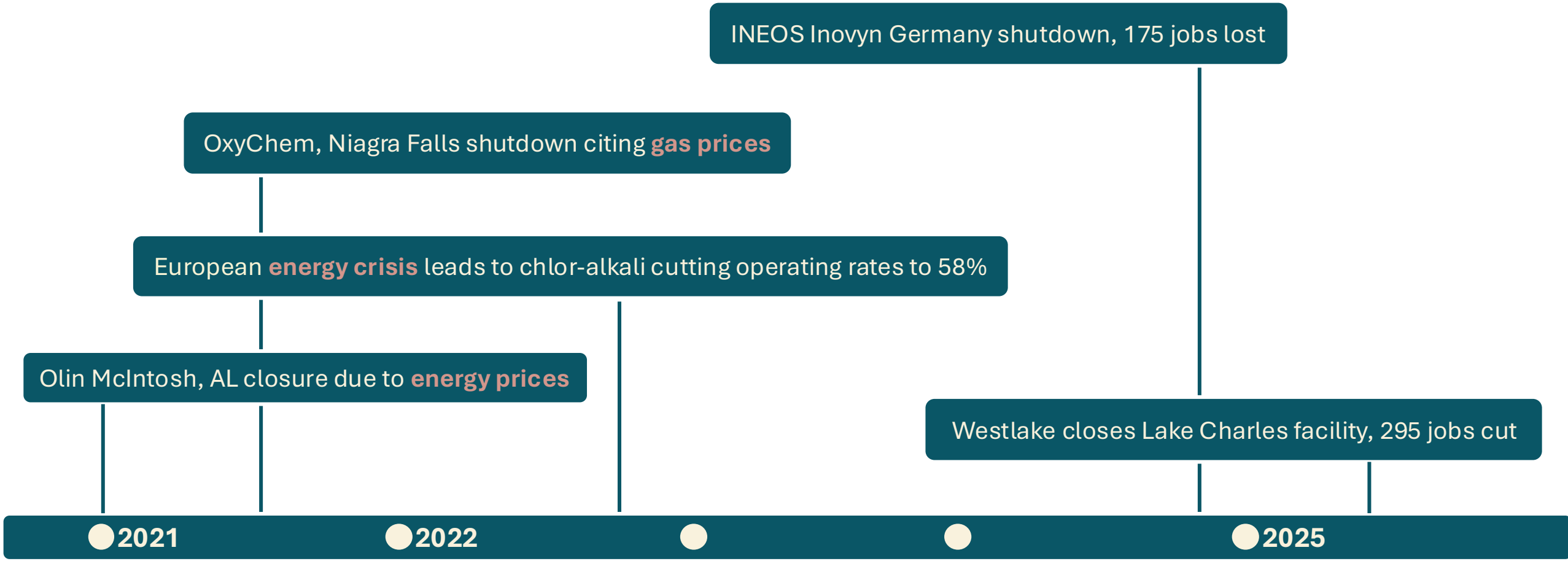








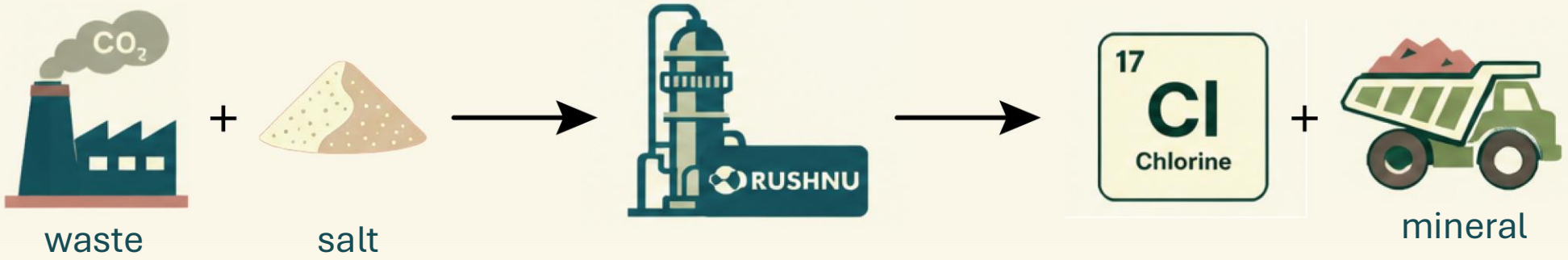
Why are chlorine prices increasing?


INEOS Inovyn Germany shutdown, 175 jobs lost
OxyChem, Niagra Falls shutdown citing gas prices
European energy crisis leads to chlor-alkali cutting operating rates to 58%
Olin McIntosh, AL closure due to energy prices
Westlake closes Lake Charles facility, 295 jobs cut
2021
2022
2025






RUSHNU
Redefining chlorine production. Low-cost. On-site. With Wastes.



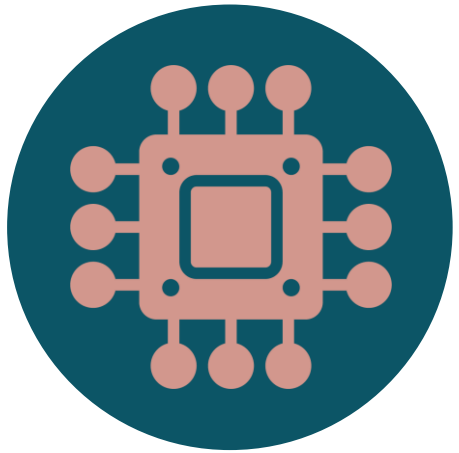
PCT/US2024/015167 (WO 2024/168247 A1)
National phase filed in the US, Canada, Japan, China and India



Bleach (NaOCl)
wastewater

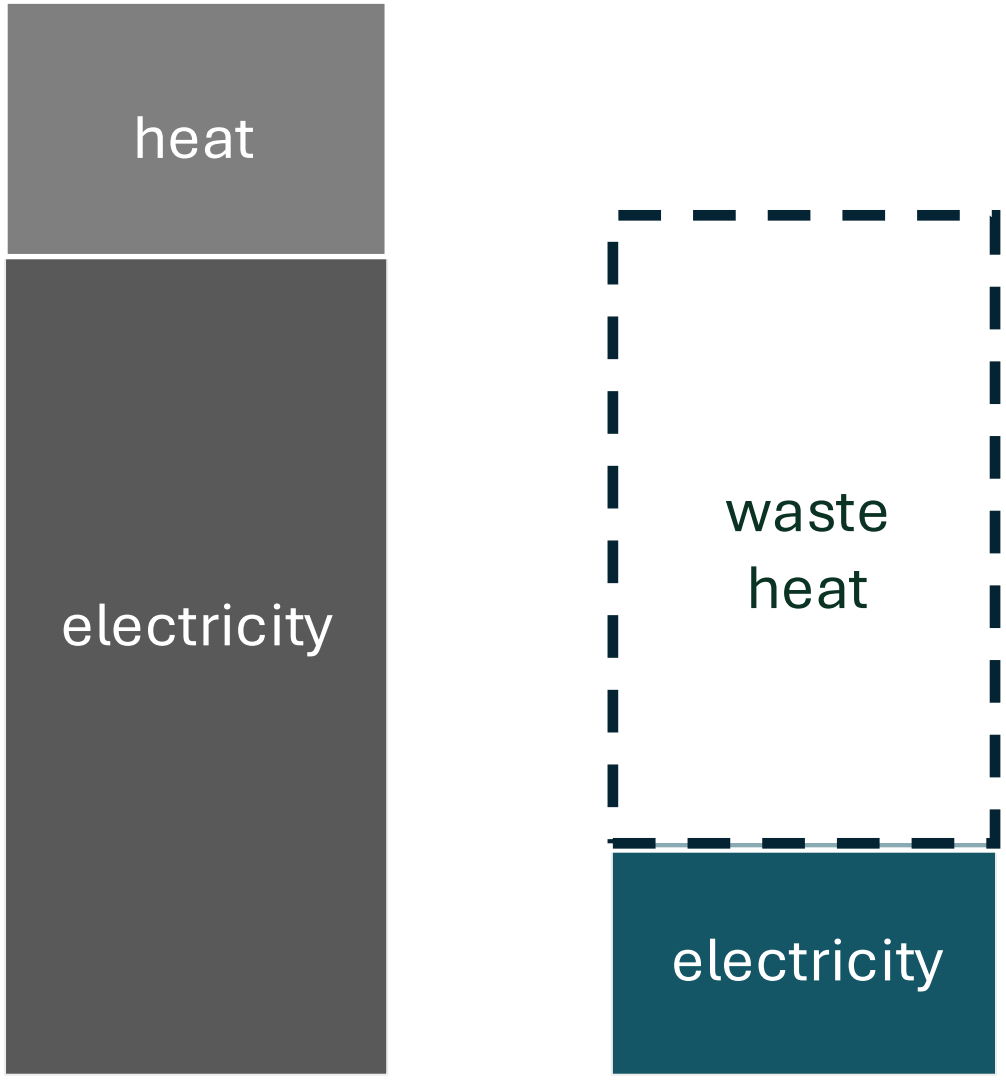


Hydrochloric Acid (HCl)
steel & mining



High purity Cl_2
semiconductors

Energy (MWh/T Cl_2)



Chlorine Industry

Rushnu

heat is cheaper than electricity

4 – 5×

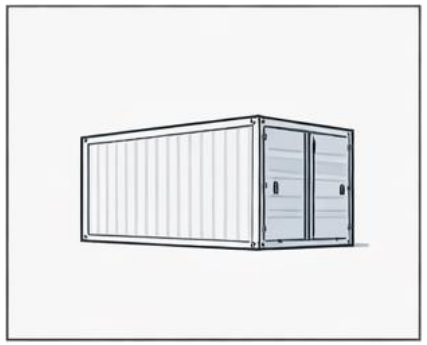
waste heat reduces cost by

>60%

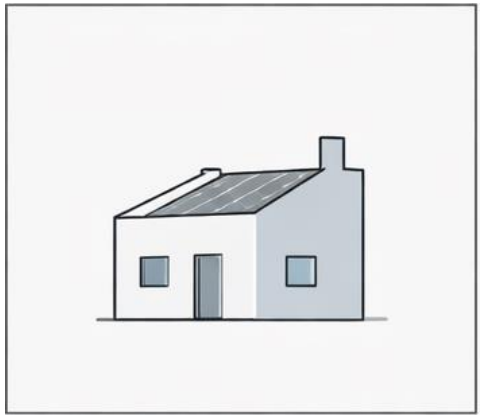




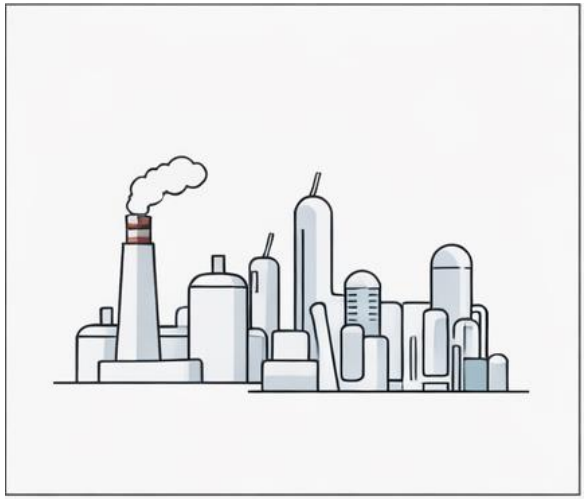
Price Stability



field pilot
4 T/y



commercial demo
100 T/y



commercial
1,000 T/y

$275K, NSF Phase I

$2M non-dilutive funding
$3M additional





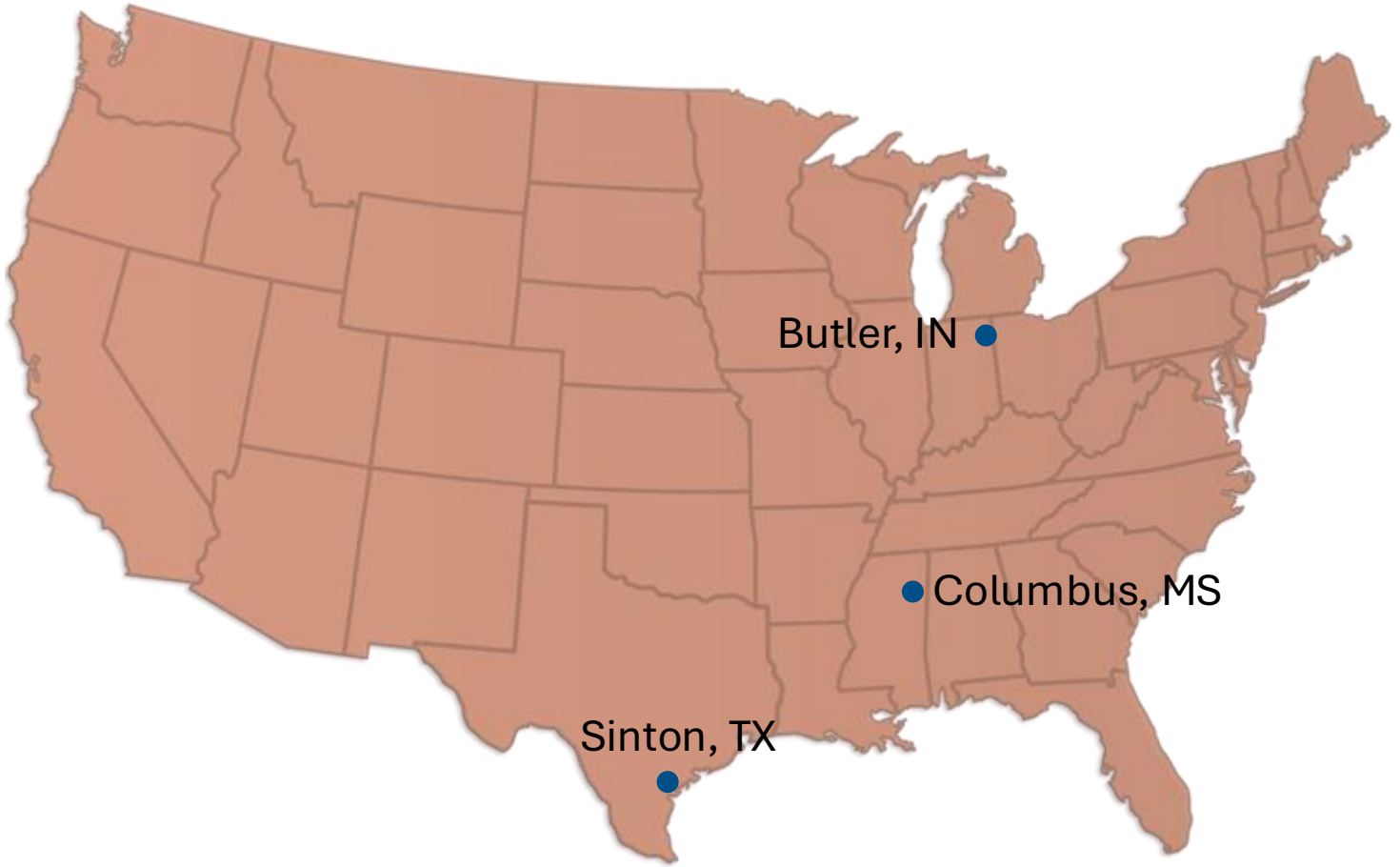


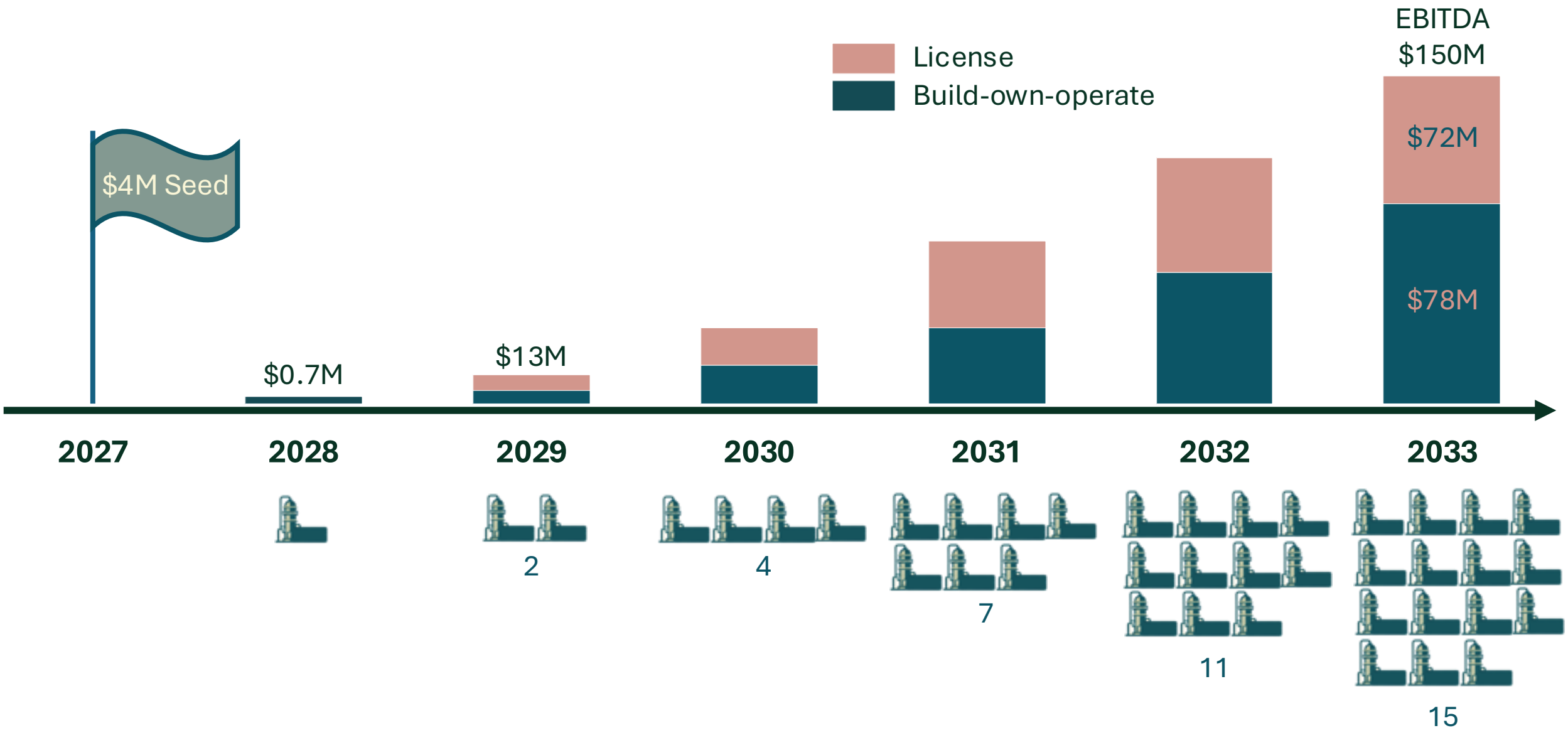
$1M pilot at Steel Dynamics sponsored by:

NETA

SCHMIDT FAMILY FOUNDATION

40,000 T/y units with SDI:




EBITDA
$150M
License
Build-own-operate
$72M
$78M
$4M Seed
$0.7M
$13M
2027
2028
2029
2030
2031
2032
2033
2
4
7
11
15

Bleach (NaOCl)
Wastewater

Hydrochloric Acid (HCl)
Steel

High Purity Cl_2
Semiconductors

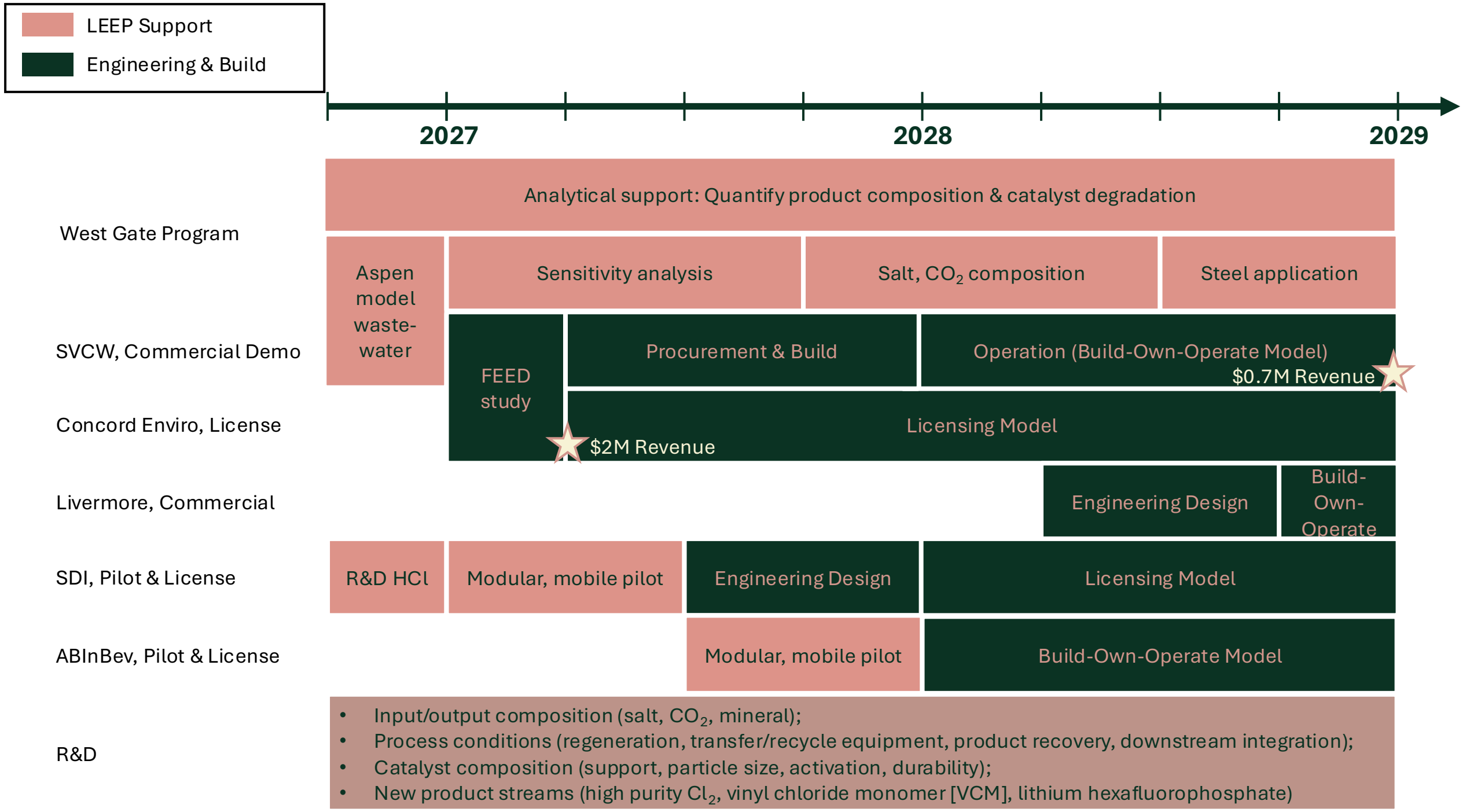


ASPECT NOFO with:

TotalEnergies
Port Arthur, TX

National Laboratory of the Rockies
Golden, CO

LEEP plays a critical role in supporting R&D


LEEP Support
Engineering & Build
2027
2028
2029
West Gate Program
Analytical support: Quantify product composition & catalyst degradation
Aspen model waste-water
Sensitivity analysis
Salt, CO_2 composition
Steel application
SVCW, Commercial Demo
FEED study
Procurement & Build
Operation (Build-Own-Operate Model)
$0.7M Revenue
Concord Enviro, License
Licensing Model
$2M Revenue
Livermore, Commercial
Engineering Design
Build-Own-Operate
SDI, Pilot & License
R&D HCl
Modular, mobile pilot
Engineering Design
Licensing Model
ABInBev, Pilot & License
Modular, mobile pilot
Build-Own-Operate Model
R&D
• Input/output composition (salt, CO_2, mineral);
• Process conditions (regeneration, transfer/recycle equipment, product recovery, downstream integration);
• Catalyst composition (support, particle size, activation, durability);
• New product streams (high purity Cl_2, vinyl chloride monomer [VCM], lithium hexafluorophosphate)

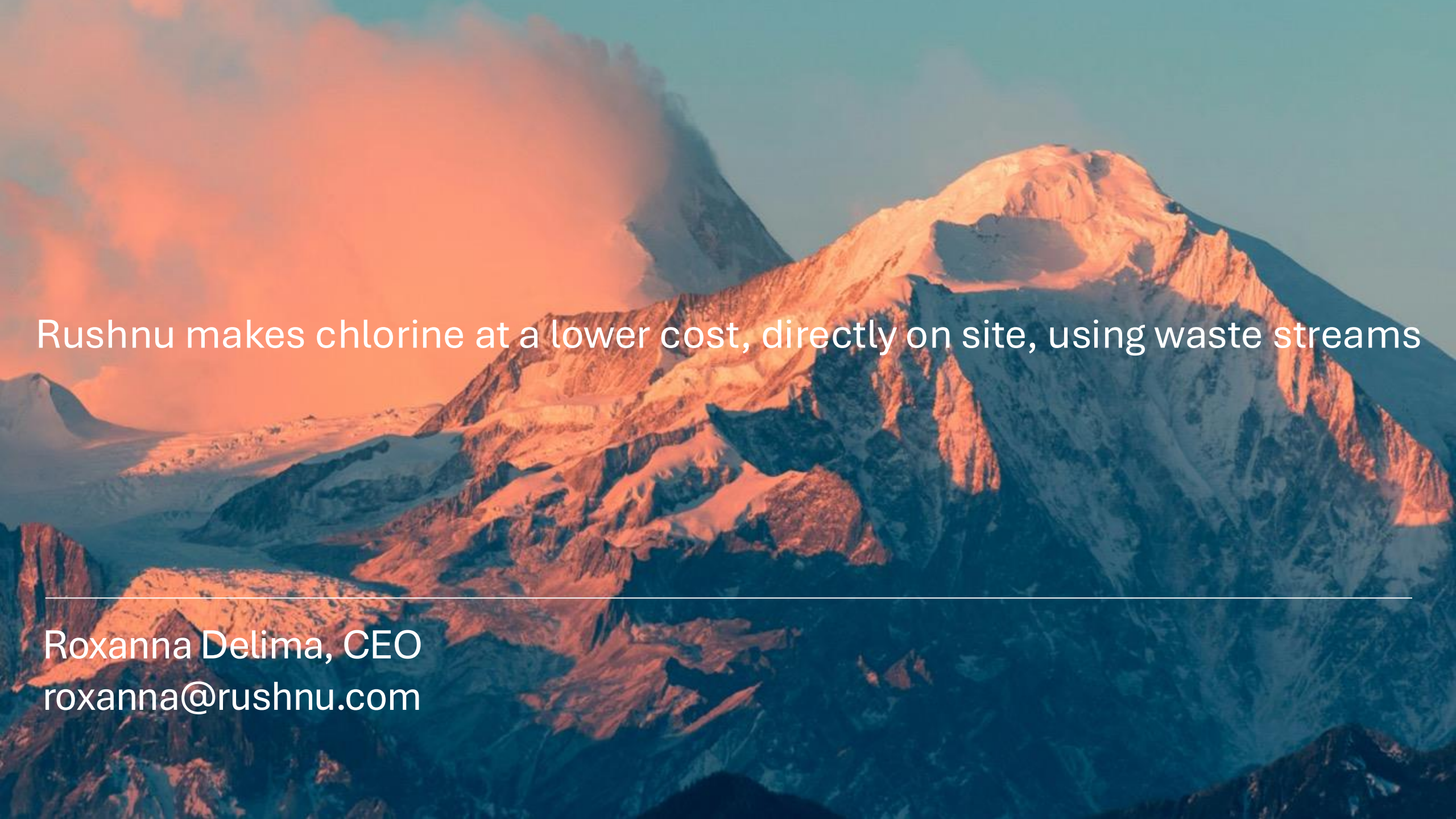
Our non-dilutive funding builds capital; our seed unlocks growth

$3M Non-Dilutive

- SVCW Capital Costs
- Process Modelling
- R&D for HCl
- Modular, mobile pilot
- 3 FTEs through 2028

$4M Seed Round

- 9-10 FTEs through 2029
- Patent expansion from 1 to >10
- Business model expansion
- New product streams



Rushnu makes chlorine at a lower cost, directly on site, using waste streams

Roxanna Delima, CEO
roxanna@rushnu.com

Our team includes seasoned experts with operational experience



Roxanna Delima, PhD
CEO & Co-founder
10+ years in electrolysis, chlor-alkali, and FOAK pilots



Greg Dicosola, PE
COO & Co-founder
20+ years leading operations from pilot to commercial



Matin Hanifzadeh, PhD
CTO & Co-founder
15+ years in building carbon capture technologies



Rakesh Radhakrishnan, PhD
Executive Advisor



Carmo Pereira, PhD
Wastewater Advisor



Steven Musial
Steel Advisor

Pre-seed investors:

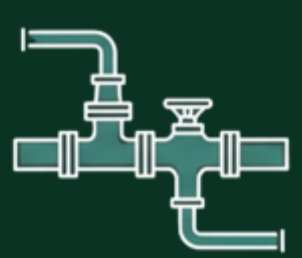
prithvi Ventures
MHUB
COOL CLIMATE COLLECTIVE
gener8tor

Incubators & grants:

C2V CARBON TO VALUE INITIATIVE
CREATIVE DESTRUCTION LAB
Greentown Labs
SBIR·STTR America's Seed Fund
WEST GATE
National Laboratory of the Rockies
Berkeley IPIRA
NETA
SCHMIDT FAMILY FOUNDATION
NSF

Our Field Pilot in California Validated our 60% Reduction in Cost

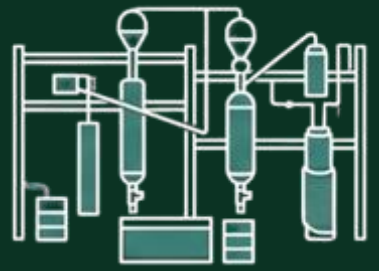
Funded by NSF Phase I ($275K)



Tie-In to Waste Biogas/Flue Gas



Mineralization

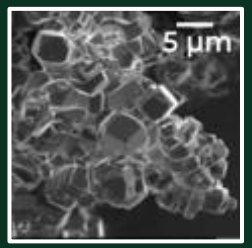


Catalyst Regeneration



Bleach

✓ Meets industrial specs



Precipitated Calcium Carbonate (PCC)

✓ Qualified by Imerys

✓ ≥98% purity

✓ Suitable for paint & coating applications

Biogas Comp.	
CO_2	33–41%
CH_4	52–69%
H_2S	<242 ppm
VOCs	<21 ppm

Flue Gas Comp.	
CO_2	7%
O_2	8%
CO	270 ppm
NO_X	<57 ppm

Operation

✓ Validated process conditions & catalyst durability

✓ Exceeded model and economic targets





We Have Commercial Traction & Deployment Funds

Wastewater Treatment

Local Municipalities

SVCW
Silicon Valley Clean Water

- Pilot complete
- 80 T/y commercial demo underway ($650K/y revenue by 2028)

LIVERMORE
CALIFORNIA

- Pilot agreement signed
- First 1 kT/y commercial build in 2028

LOS ANGELES COUNTY SANITATION DISTRICTS
Converting Waste Into Resources

- In the pipeline

Global Companies

CONCORD enviro

- MOU licensing agreement with project pipeline of $50M in negotiation

VEOLIA

- Partner through C2V
- Discussions on piloting at a municipal facility

ABInBev

- Applied for paid pilot & accelerator program
- In the pipeline

Adjacent Markets

Steel

SDI Steel Dynamics, Inc.

- Pilot plant beginning late 2026
- Off take agreement in the pipeline
- Three potential 40 kT/y plants in the pipeline

Energy

TotalEnergies

- Partner through C2V
- Anticipating study in the pipeline

Non-Dilutive Capital Investments

National Science Foundation
SBIR·STTR America's Seed Fund

$1.25M
For SVCW commercial demo
Award # 2423576

0.75M top-up opportunities

WEST GATE
National Laboratory of the Rockies

$380K
For simulation of commercial wastewater and steel units & entrepreneurship support

NETA
SCHMIDT FAMILY FOUNDATION
PHILANTHROPY FOR A BETTER WORLD

$1M
For HCl production and Steel Dynamic pilot

CONCORD enviro

$320K
For FEED study of SVCW commercial demo

Model #1: Build-Own-Operate Single Plant at Municipalities

City of Livermore hosts a standard Rushnu modular unit. Host receives 155,000 gal bleach annually at low cost, 1000 T/y reduction in emissions, and no operating risk. Host provides land, trucking access, biogas, and tie-in points.

PLANT ECONOMICS

Total installed cost	7.7 M
Operating Cost	2.6 M/y
Construction	18 months
Revenue	6.6 M/y
EBITDA	4.0 M/y
Projected IRR (unlevered)	30.8%
Operating Life	25 years

ANNUAL OUTPUT

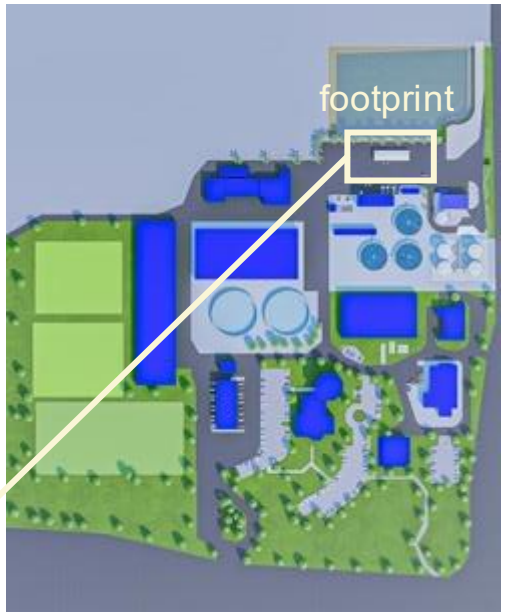
2.98 M gal
12.5% bleach (NOCl)/y

2,270 T
Precipitated calcium carbonate/y

1,000 T
Carbon dioxide captured/y









Model #2: Build-Own-Operate at Global Partner Company

ABInBev Brewery has 10 sites with anerobic digesters across the US where a standard Rushnu modular unit could operate. At each location, ABInBev receives bleach at low cost, reduction to carbon emissions, and no operating risk in exchange for land, trucking access, biogas, and tie-in points.

FORT COLLINS, CO	
Bleach Cost	$2.30 /gal
Rushnu Bleach Cost	$1.61 /gal
Annual Output	5.1 M gal/y
EBITDA	$2.8 M/y
Savings ABInBev†	$0.61 M/y
Reduction in CO_2	1.7 kT/y

LOS ANGELES, CA	
Bleach Cost	$3.00 /gal
Rushnu Bleach Cost	$2.10 /gal
Annual Output	19.6 M gal/y
EBITDA	$4.4 M/y
Savings ABInBev†	$0.79 M/y
Reduction in CO_2	6.6 kT/y

FAIRFIELD, CA	
Bleach Cost*	$3.55 /gal
Rushnu Bleach Cost	$2.48 /gal
Annual Output	11.6 M gal/y
EBITDA	$5.5 M/y
Savings ABInBev†	$0.94 M/y
Reduction in CO_2	3.9 kT/y

*Fairfield $3.55 is an awarded municipal bid (Bay Area Chemical Consortium, awarded to Olin, Mar 2026). Fort Collins and Los Angeles are estimated against that benchmark.

† Savings ABInBev only accounts for bleach cost reduction and not savings from reduced carbon emissions or other value brought by partnering with Rushnu

Model #3: License to Global Partner Company

Concord Enviro is an EPC with multiple sites in Asia and GCC. Our partnership includes a paid FEED, a signed MOU for licensing, and an equity stake in Rushnu's Seed round.

License in Wastewater

Products	Bleach and $CaCO_3$
EBITDA margin	63%
Site Capacity	1000 T/y CO_2
# of Sites	21
Site Locations	India & South Asia
Royalties on Sales	12%
Total Revenue By 2033	~$32 M

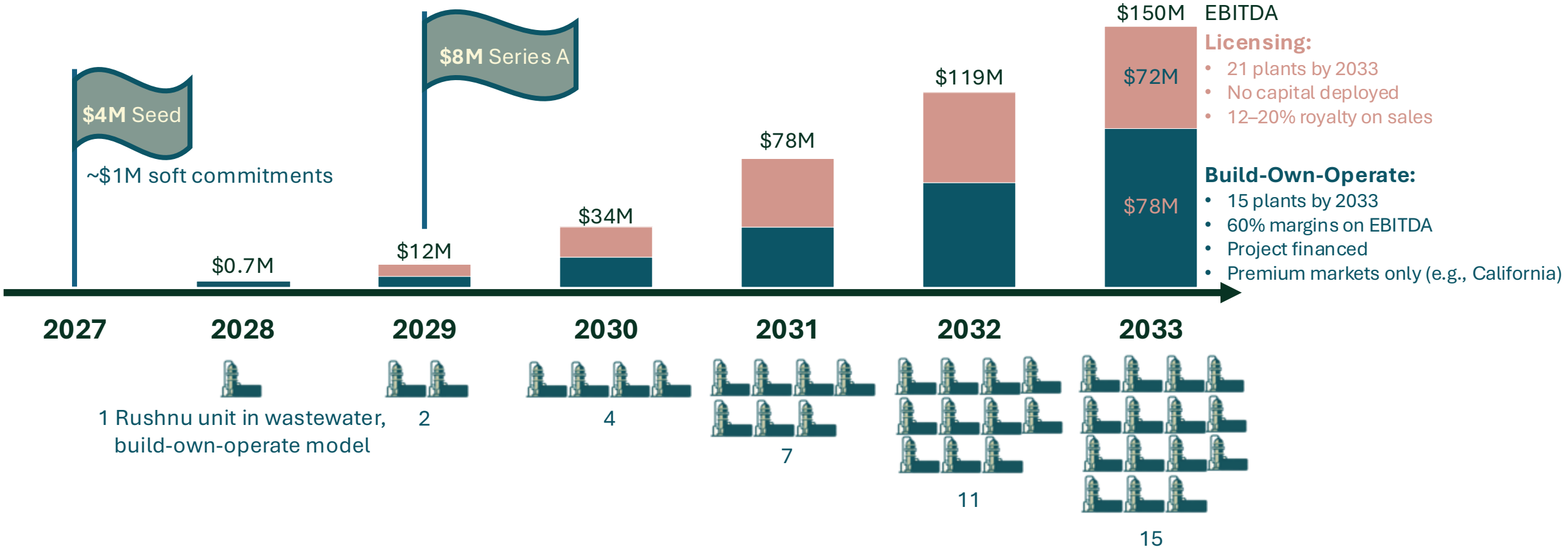
Steel Dynamics (SDI) are a major steel producer in the US. Our partnership includes an on-site HCl pilot beginning 2026 and an off-take agreement in the pipeline.

License in Steel

Products	HCl and Na_2CO_3
EBITDA margin	65%
Site Capacity	40,000 T/y CO_2
# of Sites	3
Site Locations	IN, MS, TX
Royalties on Saved cost	20%
Total Revenue By 2033	~$40M

Rushnu supplies process, catalyst, and engineering.

We Are Raising a $4M Seed to Unlock $150M EBITDA By 2033



We build-own-operate in wastewater, and license in wastewater and steel industries