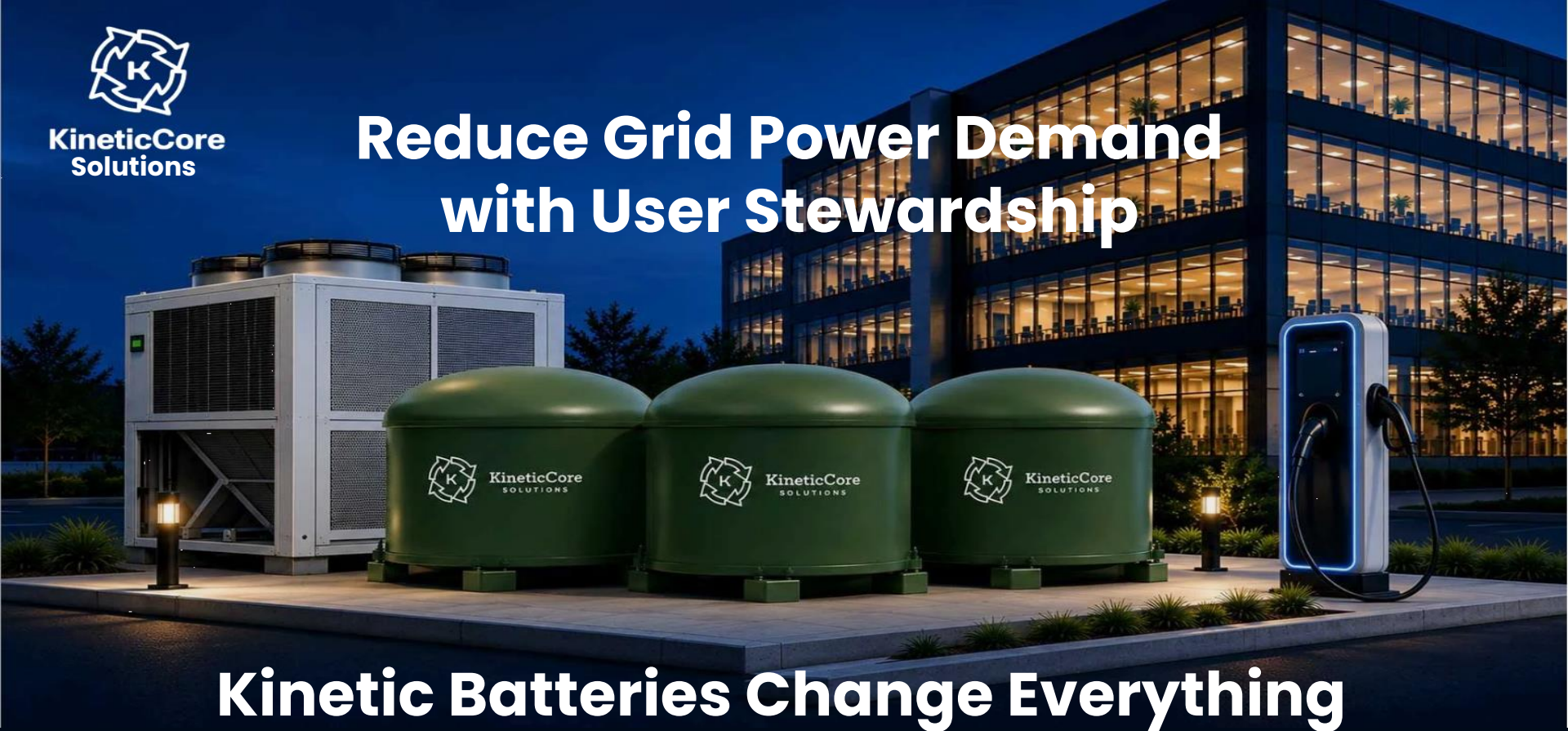
KineticCore Solutions

Reduce Grid Power Demand with User Stewardship



Kinetic Batteries Change Everything

Presented by:
Dr. James Clegern, President & Founder
James@kineticcore.com, 970-541-0486 (office)

28 Oct 2026

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CHALLENGE:

Grid Power Demand

US Commercial, Industrial and Transportation (CI&T)[1] have a 1,200 GW, **$232B/yr** problem: power demand

Plus 37 million metric tons[1] of CO2/yr

Up to 50% demand growth by 2040 for electrification

590 GW	**$944B**	**$248B/yr**	**18Mton/yr**
Added power demand[2]	Estimated grid upgrades[3]	Added power demand costs[4]	Added CO2

(1) www.EIA.gov, 63% of 1,900 TW at $16/kW av. power demand; (2) www.cleanpower.org; (3) CPUC 2023 Electrification Impact Study; (4) at $35/kW av. power cost in 2040

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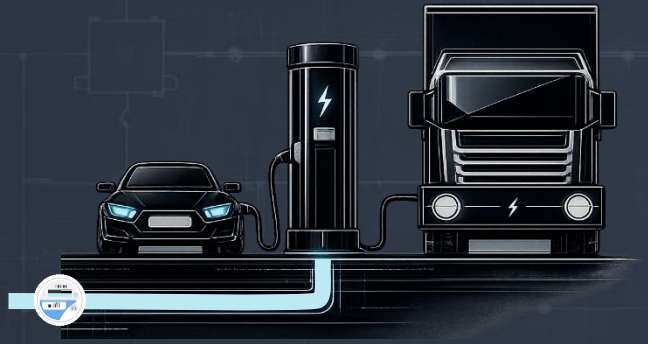
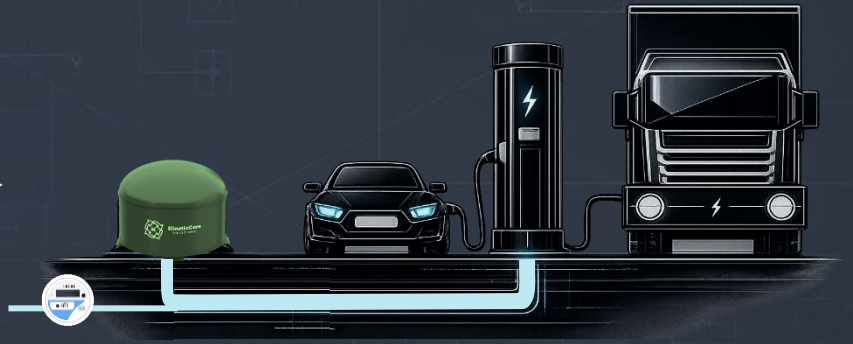
SOLUTION:
Power Support



Full Grid = Full Power at $$$



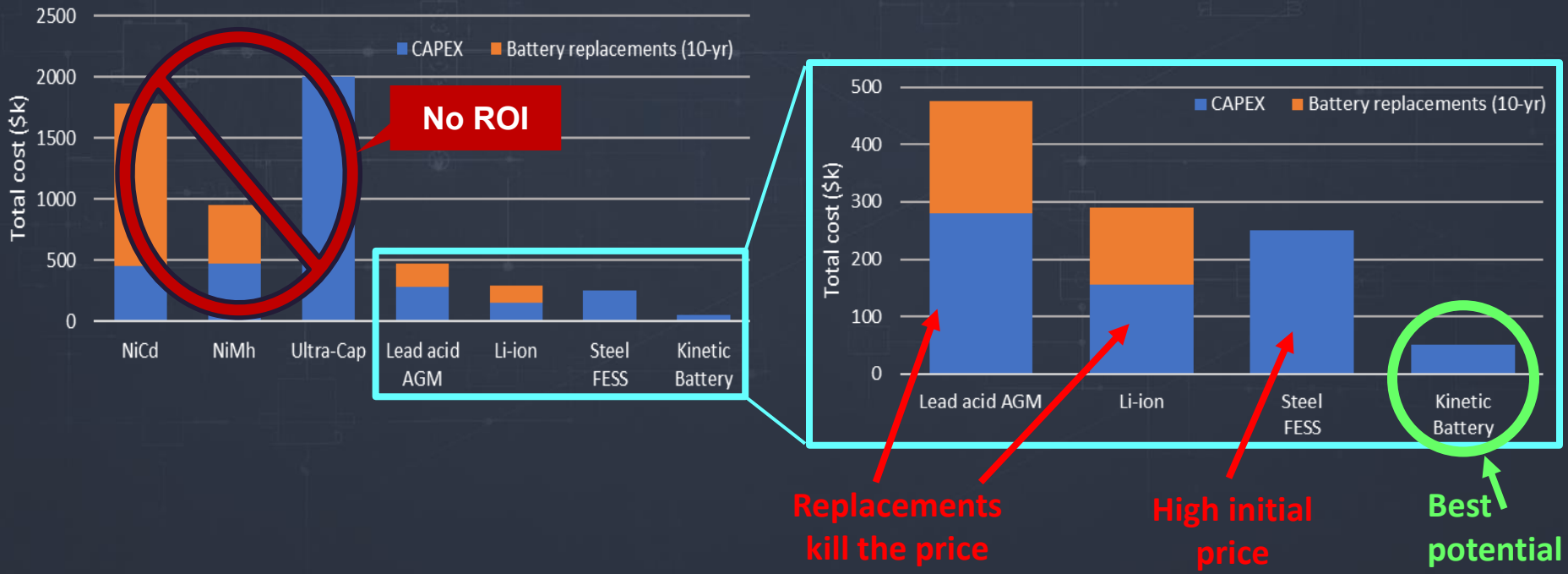
Partial Grid + Kinetic Battery = Full Power at $

- Behind-the-meter
- Periodic (on/off) loads
- Multiple cycles/day

✓ Shaves peak power up to 80%
✓ Lowers power costs up to $110k/yr
✓ Reduces grid power upgrades
✓ Reduces power plant emissions

Cost of Power Support Options

With a Behind-The-Meter high-power battery



https://www.batteryuniversity.com battery data; 250 kW boost @ $20/kW = $75k/year saved, 15 partial battery cycles per day @ 25 kWh each. Initial CAPEX based on commercial purchase; 65% CAPEX used for replacement costs. $/kW adjusted for DoD & EoL. No ROI means battery is not paid off before replacement is needed or 10-years operations complete.

Kinetic Battery Advantages

First affordable option for power demand reduction

TRL-5 prototype complete

TRL-6 (2027)

Ready for TRL-7 pilots (2027-2028)

65%
Lower cost than
Li-ion @ high-power

200,000+
Cycles,
25-year life

Safe
Eliminated
hazards

Non-chemical
No spills, poisons, or fires
& fully recyclable

Individual Kinetic Battery Power Impacts

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Affordability for ALL stakeholders

Facilities Save

$100k on grid access upgrades

$1.5M on power costs

25% On maintenance

Utilities Save

$400k of deferred grid upgrades

9 GWh of regulation

3,450 tons of CO2 produced

Supply Chain Saves

960 tons of mined rare earth & mineral ores

1.6 MWh of Li-ion batteries

0.95 tons of Li-ion non-recyclable hazardous waste

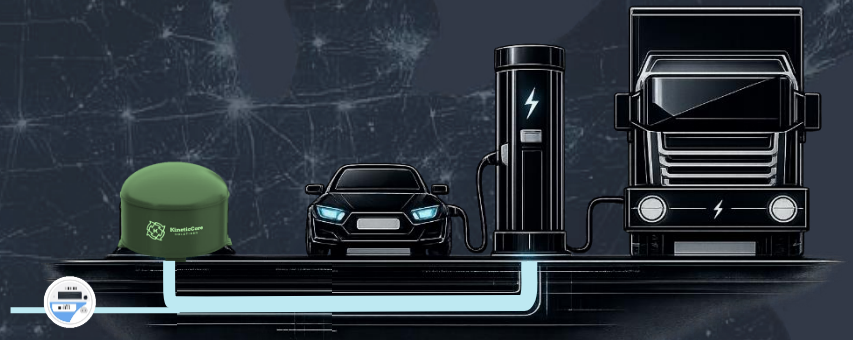
Re-allocates all of these Li-ion resources vs. stationary storage = 950,000 iPhone-18s!

*Shaving 250 kW peak power 4-hrs/day, over 25-yrs; $400/kW grid upgrade cost; $20/kW power cost; 375 kg CO2 per MWh; 400 kWh 0.6C Li-ion battery w/ a 6.5-yr life & 7% of Li-ion recycling is hazardous

Kinetic Battery Scaled Impact

For peak power demand reduction

If 10% of US CI&T facilities[1] use Kinetic Batteries to “shave” 250 kW of power by 2040



Partial Grid + Kinetic Battery = Full Power at $

163 GW
27% reduced power demand

$260B
28% saved in grid upgrades[2]

$68.5B/yr
Decreased power costs[3]

5 Mton/yr
Decreased CO2 generation

$70B+ Total Addressable Market[4]

(1) 6.5 million US sites, (2) CPUC 2023 Electrification Impact Study; (3) at $35/kW av. power demand in 2040; (4) av. two KBs per DC deployment w/ 30% Federal tax credit

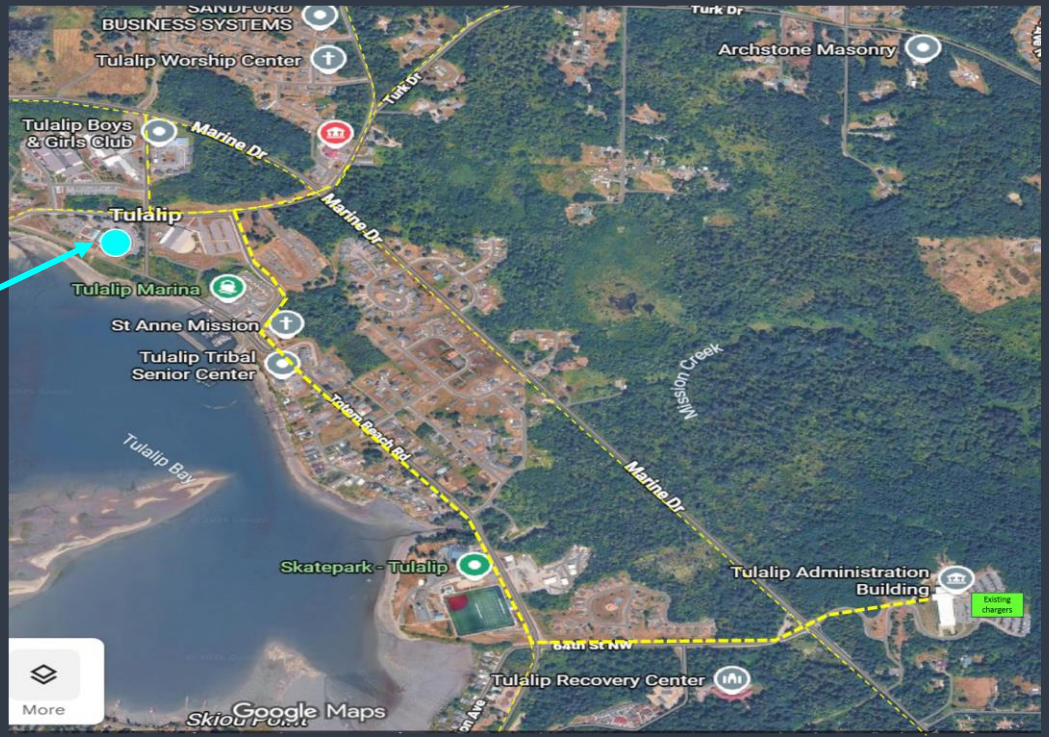
Kinetic Battery Pilot

Supporting the Tulalip Tribe environmental and land stewardship

<u>1st Planned Pilot (potential WA Grant)</u>:

- Clinic heat pump + HVAC update & EV fast charging w/o transformer upgrade
- Reduces grid peak power draw 60%
- Reduces diesel generator use ~70%

Additional funds needed to reduce risk and expand pilot production operations

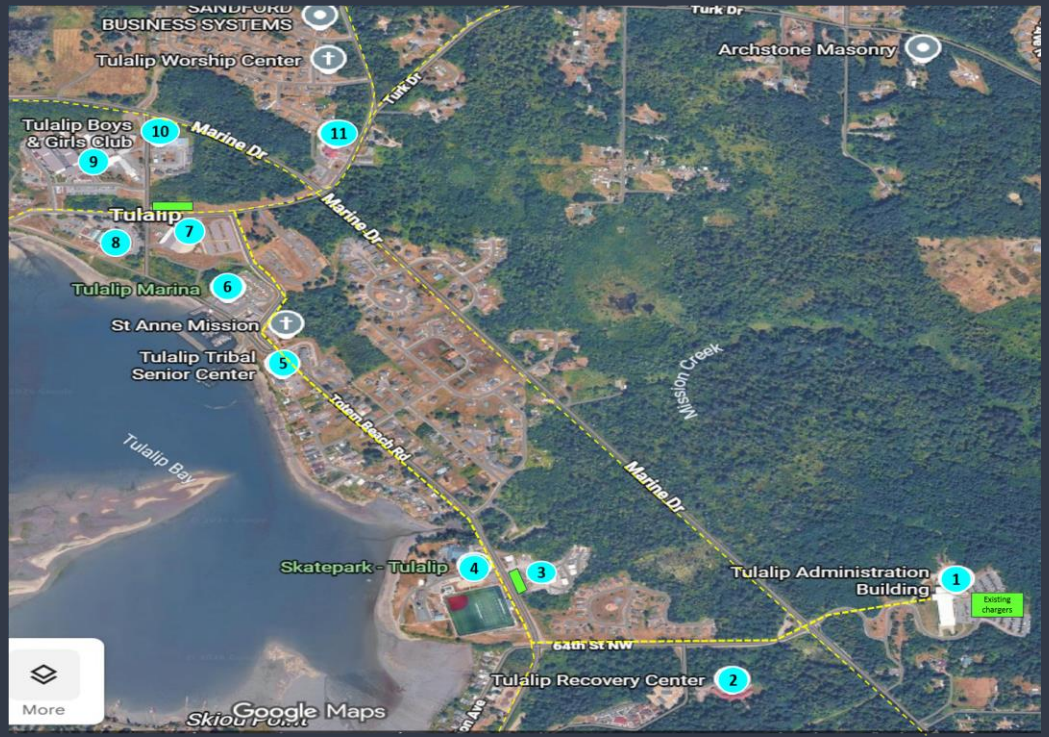


Tulalip Tribe Leading “Green”

Supporting the Green energy storage development, deployment and scaling

23 potential Tribal deployments at 11 locations

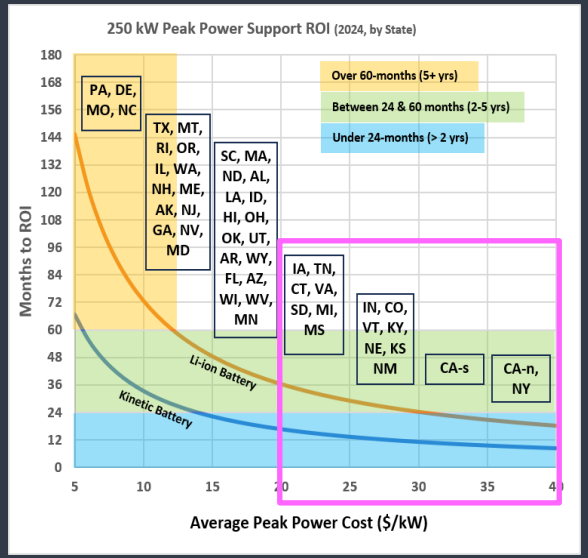
- Supports Priority Climate Action Plan to reduce GHGs & improve resiliency
- Reduces Tribal grid infrastructure upgrades to further electrify
- Supports multi-node microgrid plan
- Reduces Snohomish PUD power draw = less peak generation & pollution

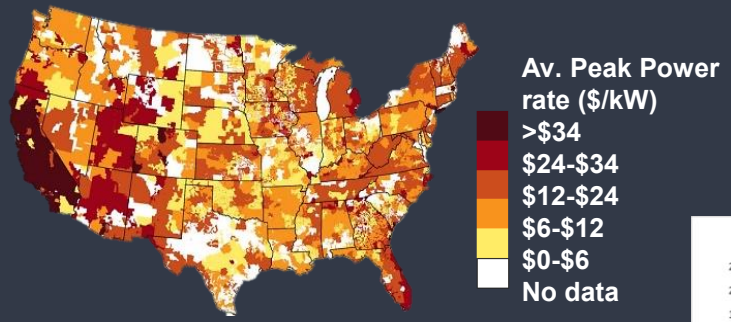


Market Growth

US power demand costs

2024
$42B TAM

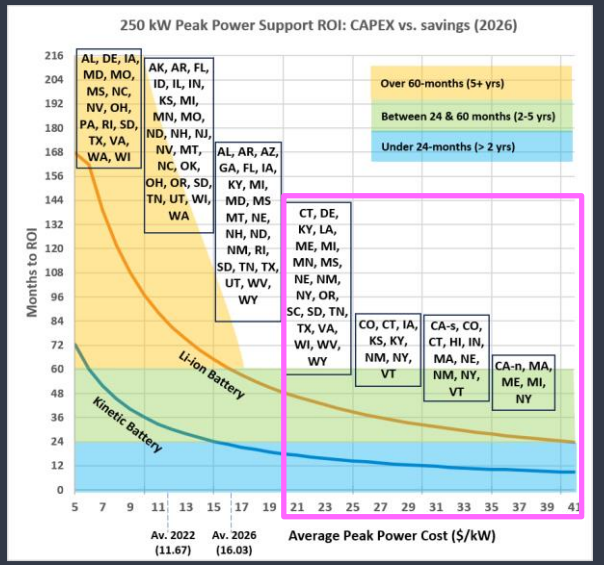




Primary Market Update

- 2024, 17 states with $20/kW or higher power demand
- 2026, 30 states with $20/kW or higher power demand
- Increased Total Addressable Market over 35% in **two years**

2026
$65B TAM



Traction & Action

Vetted and high customer demand

Grants/Prizes Won ($546k)

OEDIT · NSF National Science Foundation · Colorado State University · U.S. Department of Energy Office of Electricity

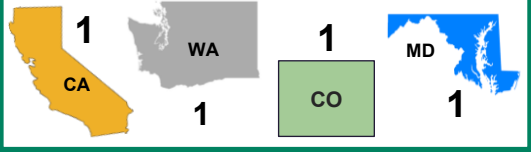
Energy Accelerators

Creative Destruction Lab · REACH · amazon web services · West Gate NREL

Pre-Seed Raise

$1.58M (TRL-2 to 5)

Four Pilots Planned



Initial Market Entry

Customers/Partners	NDA/LOI/MOUs
• EV Fast Chargers • Facility power • Microgrids • Utilities	49
Distributor/Licensee	9

Requested Units	2027-2033
Pilot + Commercial	11,792
Direct Revenue	$503M
Reoccuring Revenue	$87M
License Revenue	$95M
Total:	**$685M**

Go-To-Market Strategy

Markets, expansion and supply

Phase 1 – completing

Market Validation (Discovery & Pilots)

- Vetted entrepreneur training
- Early customer interest
- Customer pilots & funding

Phase 2 - engaging

Demand Expansion (Channels & Partnerships)

- Access to added investment
- Utilities – demand reduction
- EV fast charging networks
- Strategic OEM & EPC relationship building

Phase 3 - developing

Supply & Deployment (Scale infrastructure)

- Commercial providers
- US & international supply chain
- Logistics & manufacturing readiness

Business Planning

Setting the path forward

Revenue Model

B2B Hardware Sales
US production + pilots

Recurring Revenue
monitoring & service

Licensing
per unit royalty fee

Power-as-a-Service (PaaS)
Battery Leasing

Expand Production

Licensed manufacturing
3-4 added facilities

Direct sales marketing
targeted by regional power costs

Distributors
with segmented & regional limits

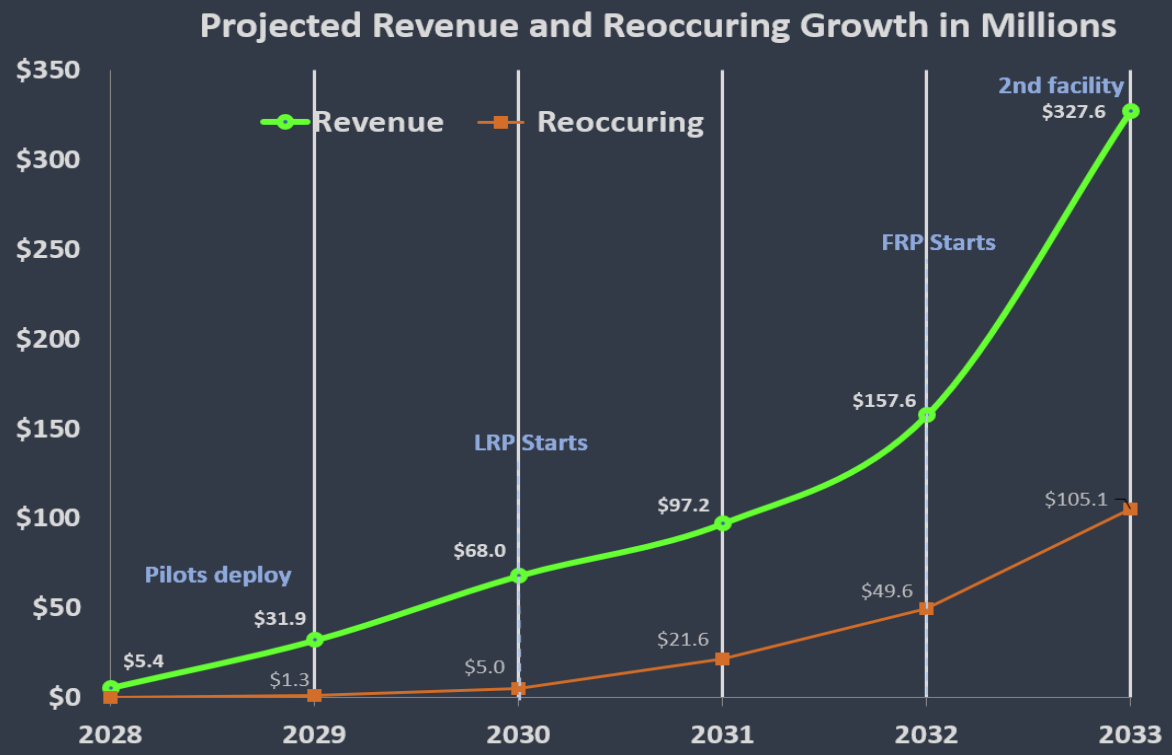
Scaling Strategy

International expansion
multi-country patent protection

US Strategic Partners
for manufacturing & market

Focus on EV adopting regions
UK, EU, Middle East, India & China

Path to $327M Revenue by 2033



Seed Investor Return Profile (7-Year)

85% IRR

74x MOIC

$25M NPV @ 25% discount

Based on first production facility capacity

Demand secured through LOIs/MOUs

Bottom-up labor & materials COGS model

Reoccuring yearly licensing & monitoring

Capital Raise & Deployment Plan

Peak power support market entry

Round Structure

- **$4M Seed, $25M Pre-Money**
- **Investors:** $250K–$2M each
- **Lead:** AHG-Energy

Capital Allocation

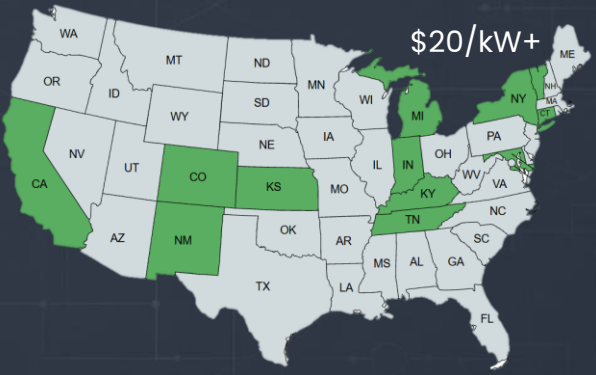
- Team expansion/hiring
- Pilots & UL Certification
- First production facility

2.5 yr Runway & Upside

- $7M soft commit for 28 pilot units
- Self-funded after Series A
- Opportunity zone & IRS Sect. 1202 qualified

5 Year Targets

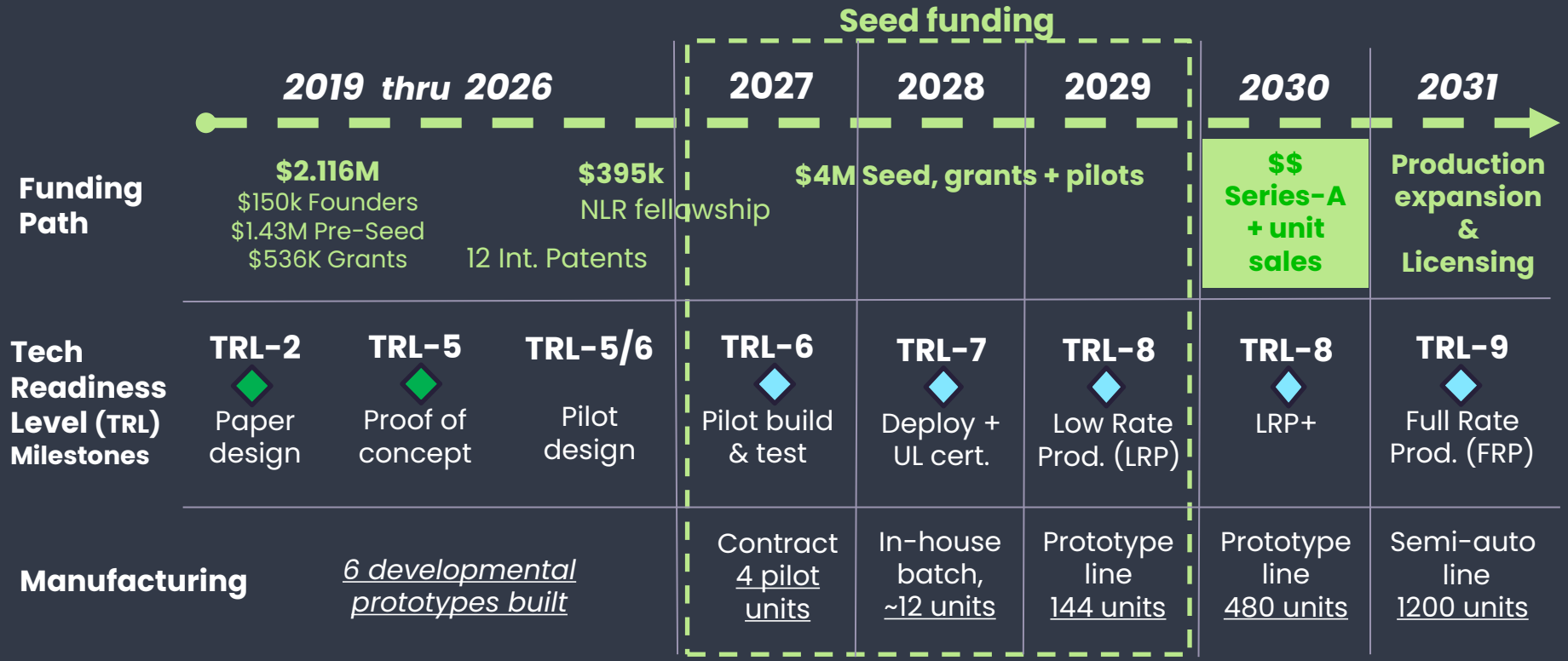
- Regional, high power cost areas



- 5,000 UL certified units deployed
- 1,250 MW demand reduction
- 250 jobs created
- Acquisition Exit

Kinetic Battery Timeline

Market entry and expansion



National Laboratory of the Rockies (NLR, formally NREL)

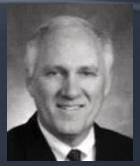
KineticCore Team

Vision and experience

Dr. James Clegern, PhD
Founder

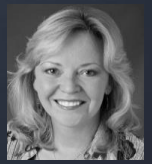
President & Chief Technology Officer

- **BS+MS Aerospace & PhD Industrial Engineering**
- **22 years - USAF Officer/Engineer/Test Director**
- **14 years flywheel design & battery analysis**



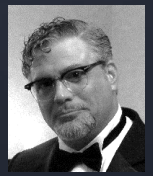
Chuck Clegern – Co-Founder
Chief Operations Officer

- BS Construction Management
- 41 years construction & electrification
- C-level leadership + 4 exited start-ups



Allison Raduziner
Business Development Lead

- BS Asian Languages & Industry
- 32 years Business dev. & marketing
- Business growth and fundraising



Erin Evans
Senior Engineer

- BS Mechanical Engineering
- 34 years systems design
- Data & system design/analysis

Primary Advisors:

Yuval Wasserman
30 years Power Systems Manufacturing
President, Advanced Energy, Retired

Dr. Byan Wilson
37 years Energy Innovation
Executive Director CSU Energy Institute

Duncan Lawrie
54 years Composites Manufacturing
President, Lawrie Technology Inc

Cabell Hodge
12 years EV & Infrastructure
Group lead, NLR Transportation and Mobility

Keith Lehmeier
12 years EV Charger Integration & Controls
Lightning eMotors Engineering Director

Raymond Cooper
12 years EV Builds and Charger Integration
President of KiloWatts EV charging

Join the Power Revolution!

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Backup Slides

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Frequently Asked Questions

1) Why are peak power loads becoming important now?

As more of the 5.9M US commercial/Industrial facilities pursue "advanced electrification", EV charging expands and data centers proliferate, added power access is expensive through an aging grid.

For example in Denver, CO: $300k for new power to support an $80k, 300 kW EV Fast Charger.

2) How have peak power loads been handled previously?

Usually in a "grimace and bear it" mode, costing ~$55B/year in 2024 and ~$115B/year by 2035 for the top 10% of peak power users and those owning EV Fast Chargers because no other options are cost effective.

3) What advantages do facilities have for lowering their peak power load (behind-the-meter)?

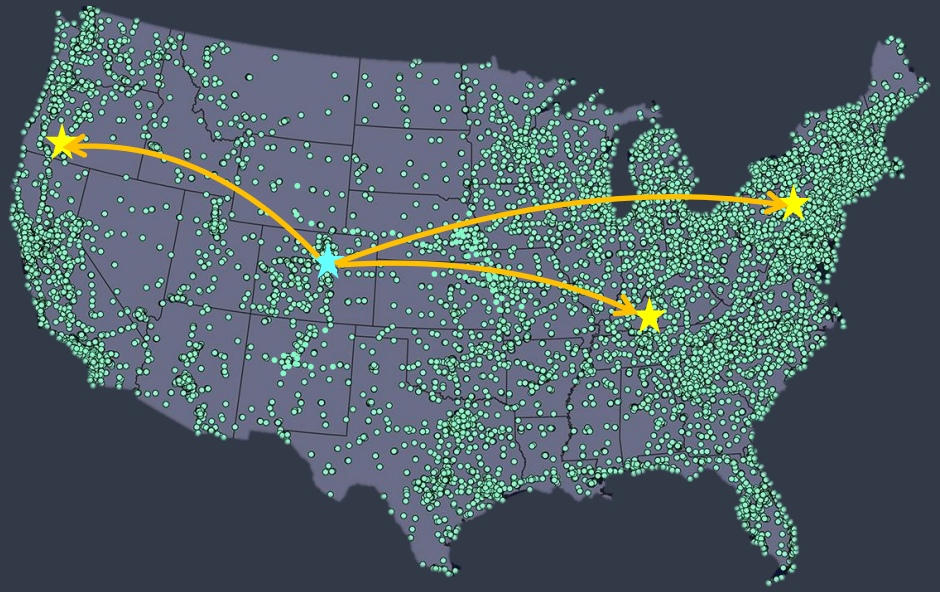
- ***Onsite control with 24/7 power access***
- ***Improves local grid power stability***
- ***Utility DR credits***
- ***Reduced Tier-2 pollution***
- ***Lower monthly power demand electrical costs***

4) What are the other advantages of Kinetic Batteries?

- ***Up to 65% lower cost than Lithium-ion batteries for the same power (ROI under 18-months for primary markets)***
- ***High-power "add-on" system & unlimited use per day***
- ***High round trip efficiency (91-93%)***
- ***Small footprint (~30 SF)***
- ***Easy to deploy & all-weather operations***
- ***Very low maintenance & easy to service***
- ***Sustainable: no battery replacements for 25-years & fully recyclable***
- ***Improved safety: no uncontrolled fire, explosion, freezing or poisonous gas failures, and no hazardous materials***

Option To Scale Through 2036

One facility to four US manufacturing sites + two potential overseas



10-yr Opportunity Zone Exit Point

125,000 units ($6.3B)
With $190M/yr recurring revenue

340 Mton CO_2 – Pollution reduction

31 GW – Reduced grid power demand

$9.4B/yr – Customer power savings

$50B – Deferred grid upgrades

1,500 – Jobs created

Confidential

Proforma

	2028 (Pre-LRP)	2029 (LRP)	2030	2031 (FRP)	2032	2033
Units sold	16	204	840	1260	2160	4320
Revenue units sold	$4M	$30.6M	$63M	$75M	$108M	$222M
Services/licensing	$136k	$1.3M	$5M	$20M	$49M	$105M
COGS	$3.7M	$21M	$45M	$62M	$94M	$183M
EBITDA	$0.8M	$7.5M	$12M	$16M	$38M	$104M
Net income	$0.7M	$7.1M	$11.8M	$16.1M	$39.4M	$105M
Total revenue	$5.4M	$32M	$68M	$97M	$157M	$327M

Predictions based on first production facility output

All units sold with waiting list thru 2033

COGS based on bottom-up labor

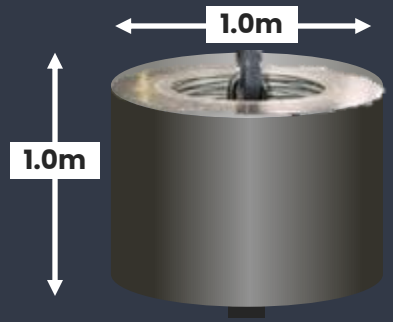
Expect 10% distributions

$4M Seed: Under 5-year ROI (2030) for ~15% equity
At 7-yr exit: NPV@25% discount = $25M, IRR = 85%, MOIC = 74x

As of 25 Sep 2026

At the “Core” of a Kinetic Battery

Patented innovation beyond traditional flywheels



Steel Cylindrical Flywheel

- 6,000 kg = 50 kWh
- Tip speed = 370 – 430 m/s
- Energy density = 8 w-h/kg
- Explosive failures
- $1,000-$1,600/kWh

High cost and mass limits use

Vs.

KineticCore Flywheel

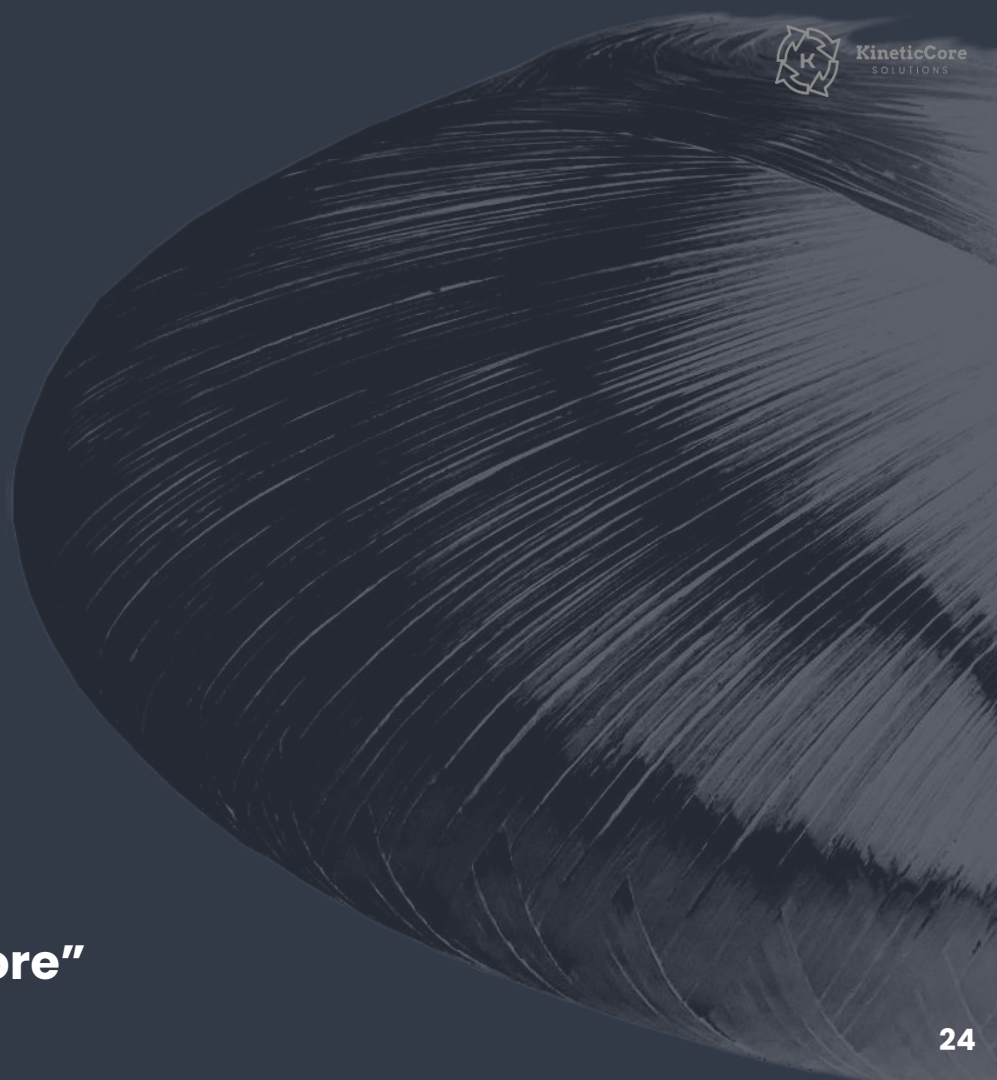
- 330 kg = 50 kWh
- Tip speed = 1,400 – 1,620 m/s
- Energy density = 150 w-h/kg
- No explosive failures*
- $190 - $230/kWh

95% Lighter, 450% Faster
= 85% Better (safer & lower cost)

*“Flywheel testing and evaluation”, ORNL report COWP-820825–7, 1994

Patent/IP Status

- **Three US Patents**
  - US-1015678 25 May 2021
  - US-11661997-B2 31 May 2023
  - US 18/302,512 6 May 2024

- **Nine International Patents**
  - European Union – EP3935293B1 23 Dec 2023
  - Japan – P422-14112JP 11 Jan 2024
  - South Africa – P90908ZA00 25 Jan 2024
  - Australia - 2020288198 28 Jan 2024
  - China – 518040 21 Feb 2024
  - Canada - 3,136,686 14 Mar 2024
  - United Kingdom - EP3935293 21 March 2024
  - India – P422-14589IN 05 May 2024
  - Ireland – 3934393 25 May 2026

- **US Trademark Secured “KineticCore”**