




TWR Holding Group

2023

# Renewable Energy Storage System (RESS)

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- RESS; Specializes in energy solutions and services on a global scale. We focus on renewable energy systems, energy efficiency technologies, power management solutions, and sustainable energy consulting.
  - Our expertise involves designing, developing, implementing, and maintaining energy systems to meet the diverse needs of clients around the world.
  - We aim to contribute to a greener and more sustainable future by harnessing the power of innovative energy solutions. Renewables will make up over one third of the global generation mix by 2025.

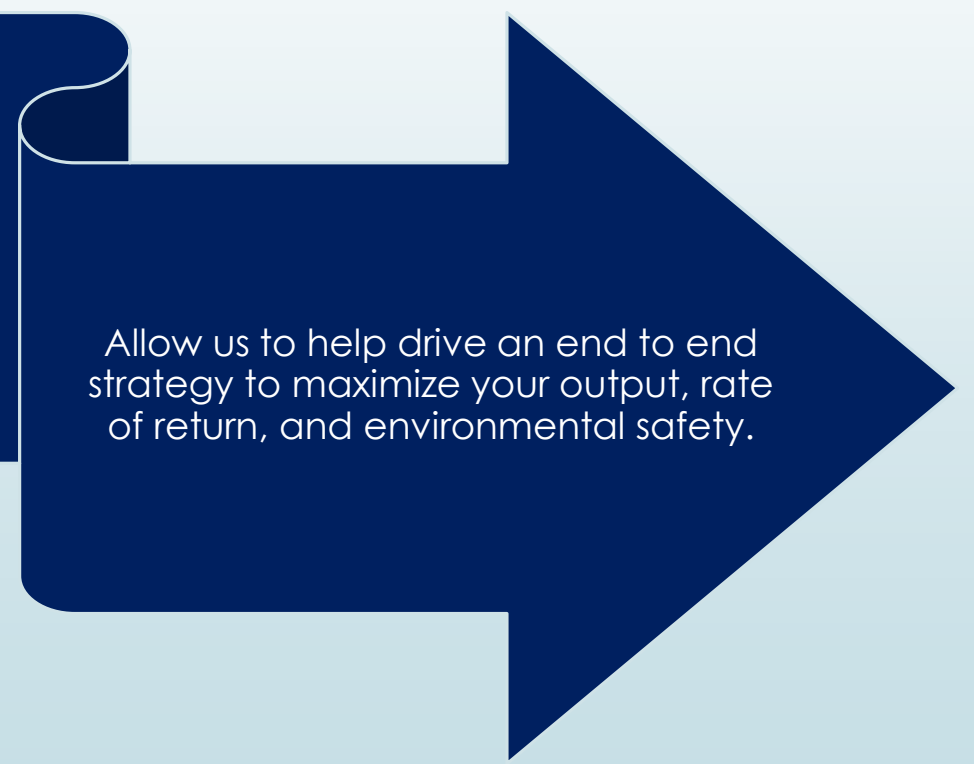
**Wilson González**  
**TWR CEO**

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# Renewable Energy Strategies

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Nature and innovation go hand in hand in providing a safer future thanks to renewable energy products developed by our team and its partners.

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Allow us to help drive an end to end strategy to maximize your output, rate of return, and environmental safety.

# Safe Battery Energy Storage Systems (RESS)





# Safe Battery Energy Storage Systems (RESS)

- Only US designed and manufactured alternative to lithium-ion and lead-acid monopolar batteries for critical 3 to 12 hour discharge duration applications.

Fully sealed. Self-contained.

Long lived.

Non-flammable.  
Non-corrosive.

High tolerance.  
Low degradation.

Variable Dod  
(Depth of Discharge) .  
Variable duration.

Reliable supply.  
Ethical sourcing.

Environmentally safe. No E-Waste.

# Data Sheet (RESS)

Item	Description
<b>Non-Lithium</b>	Zinc hybrid cathode technology. Only US designed and manufactured alternative to lithium.
<b>Discharge Applications</b>	3-12 hours.
<b>Deployments</b>	Largest non-lithium global project: 1.2 GWh (today); 2 GWh (2024) and 3+ GWh (2025).
<b>USA</b>	Domestic designed and manufactured. Only company meeting max tax credits at 50%.
<b>Tax Credits</b>	US MANUFACTURER, can lift foreign solar products for domestic content bonus for solar + RESS.
<b>Tax Credit Value</b>	50% Tax Credits for (RESS) and unlocks 10% domestic content bonus for foreign solar products.
<b>Sourcing</b>	Local suppliers, Zinc. Five (5) widely available commodities within Six (6) hrs of manufacturing facilities.
<b>Durability</b>	Degradation curve at less than 9% over the first 3 years, and 0% thereafter.
<b>Rated Capacity</b>	>91% of rated capacity over product lifespan.
<b>Safety</b>	Fully Sealed. Self contained water based unit that is non-flammable.
<b>Utilities</b>	Does NOT require fire or HVAC (Heating, Ventilation and Air Conditioning); No risk of thermal runaway.
<b>Maintenance</b>	Closed System. No moving parts, 20+ year lifecycle. 72% maintenance reduction from Lithium.
<b>Footprint</b>	No Fire risk. 84% Lower GHG footprint. Stackable (5 high), for a much smaller footprint.
<b>Environmentally Safe</b>	100% recyclable, minimal E-waste.
<b>Long-Term Financial</b>	20+ year lifecycle; payback 2.4x than lithium.



# RESS; Clean Energy Production

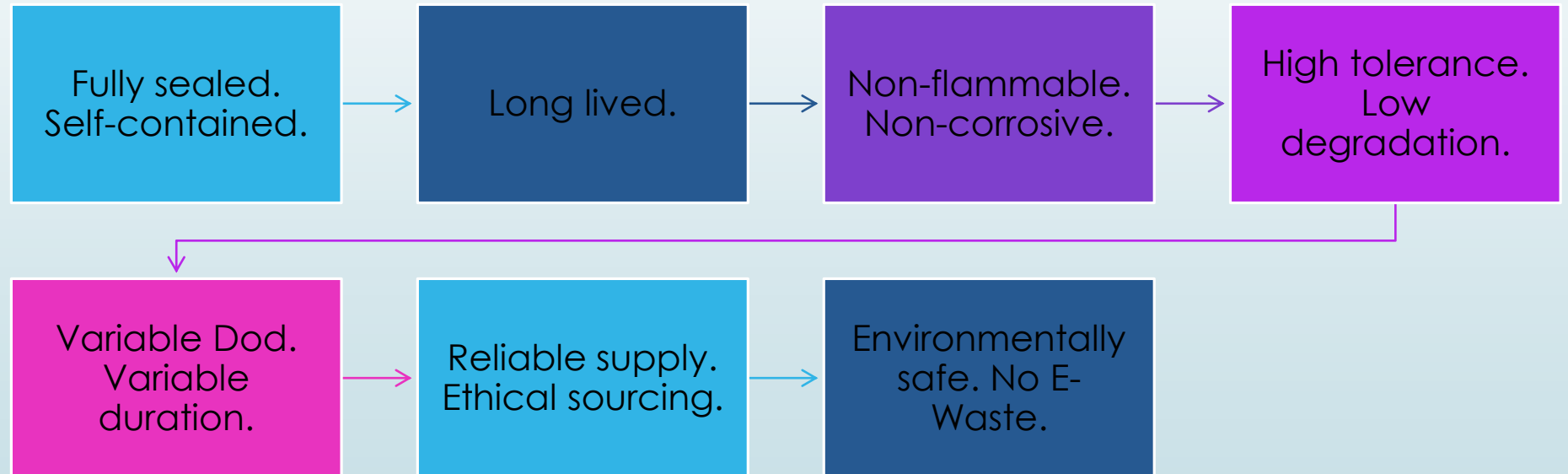
Safe Energy  
Storage.

Carbon Credits.

Engineering &  
Development.

# Safe Battery Energy Storage Systems

Only US designed and manufactured. Alternative to lithium-ion and lead-acid mono-polar batteries for critical 3 to 12 hour discharge duration applications.





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# The Power of Non-Lithium Rees

- ▶ Zinc-powered aqueous liquid battery modules are as high-performing and price-competitive as leading industry storage solutions in the intraday market. Proven and globally deployed zinc-powered chemistry delivers significant additional operational advantages in 3 to 12 hour discharge duration applications that other technologies simply can't match.

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# Fully Sealed. Long lived

- ▶ Each battery module is a self-contained unit, a closed-system design with no moving or delicate parts, so they're as easy and cost-effective to maintain as they are to manufacture. And they can last at least 6,000 cycles almost twice the operational life of most conventional battery chemistries.

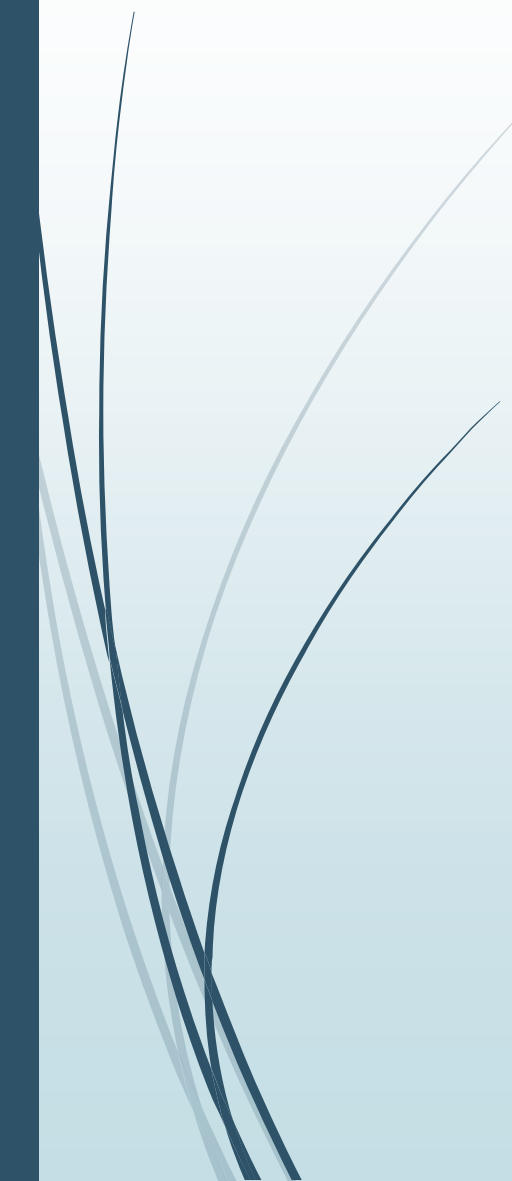
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# Non-Flammable. Non-Corrosive

- ▶ Modules are inherently safe to use. With a water-based electrolyte and flame-retardant polymer framing, there's no risk of thermal runaway. When fully charged, they're at most mildly acidic (pH 2-4 range). And even when overcharged, only negligible levels of hydrogen are off-gassed.



# High tolerance. Low degradation

- ▶ No matter what conditions our battery modules face, they keep on going even fully recovering from 90°C abuse cycles with just a simple, short rest period with no change to their overall degradation curve. Which, at less than 9% over the first 3 years and then zero thereafter, is well below conventional standards.
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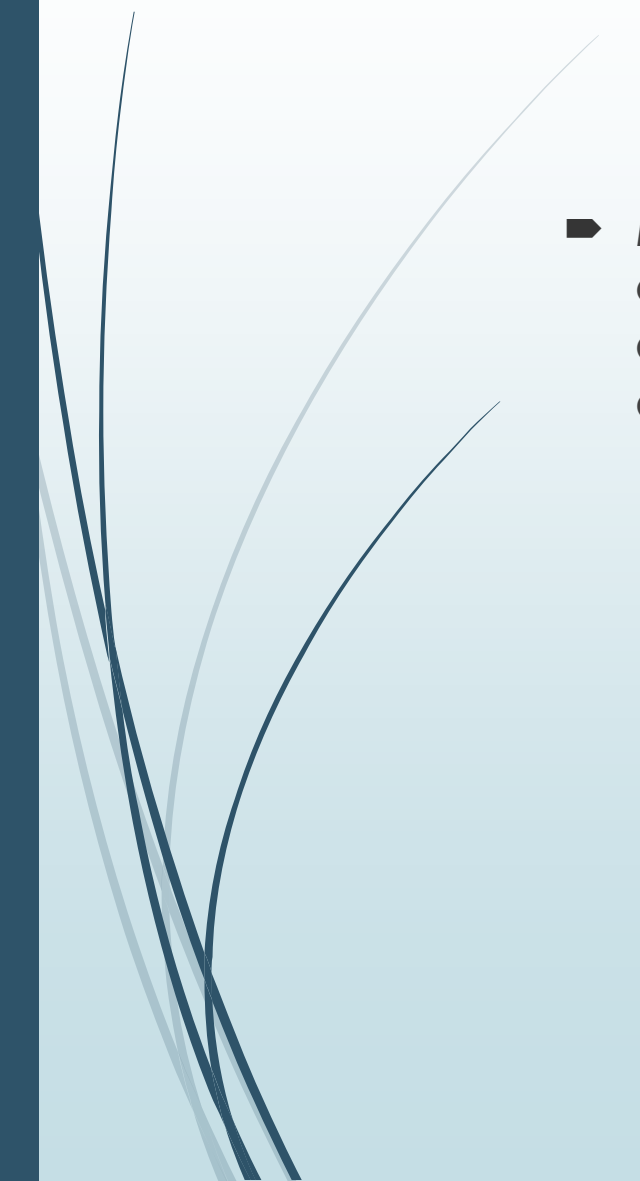


# Variable DoD (Depth of Discharge). Variable Duration

- ▶ The zinc based battery chemistry is highly tolerant of significant variation in operational requirements. A module's storage duration can range from 3 to 12 hours, with no impact on degradation. And the maximum DoD (Depth of Discharge), can be reduced for applications demanding round trip efficiency in the mid 80s.



# Reliable Supply. Ethical Sourcing

- ▶ Modules require just five low-cost, widely used, earth-abundant commodities, that have no geopolitical issues connected to their extraction. This enables local sourcing that minimizes the risk of supply chain disruptions and related price swings.
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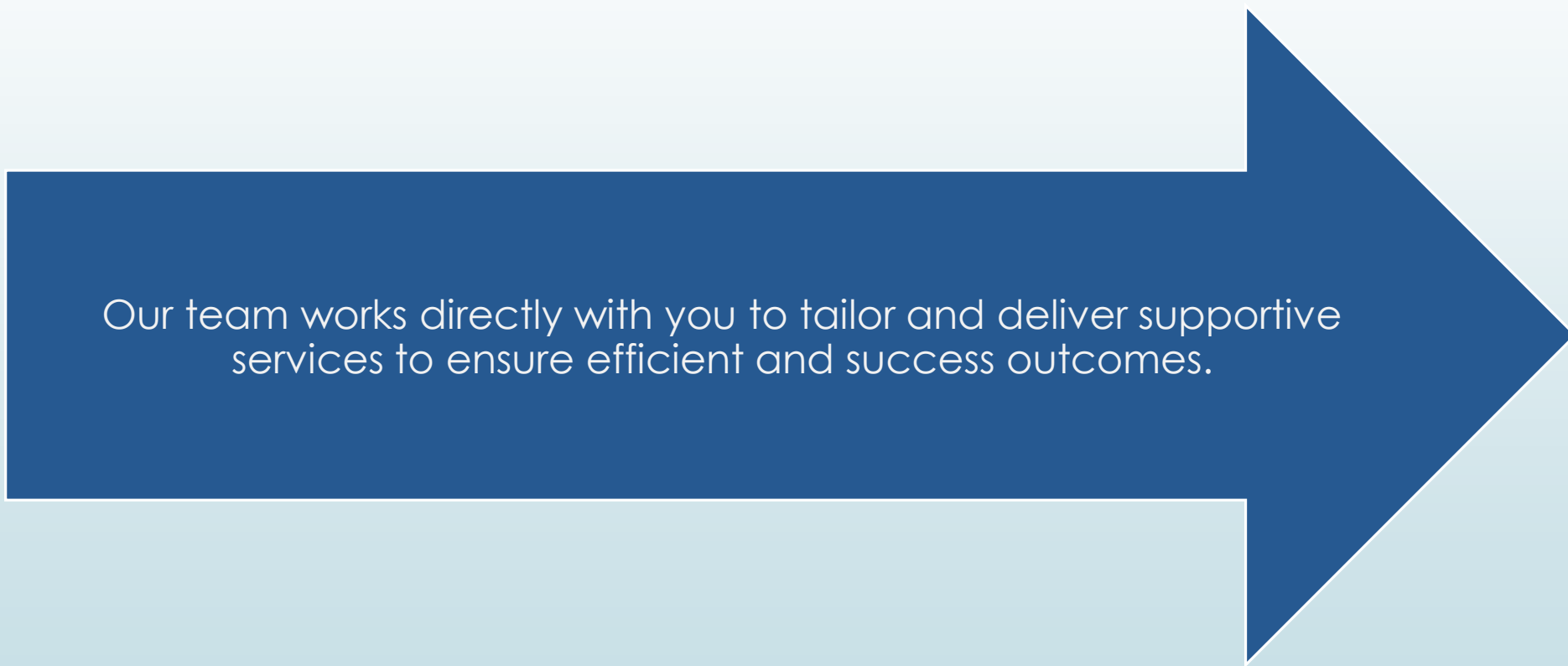
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# Environmentally Safe. No E-Waste

- ▶ When lithium-ion batteries are disposed of, they become electronic waste, also known as E-Waste. E-Waste has been declared one of our world's most pressing issues for environmental and human health by the United Nations. Our battery modules are 100% recyclable and eliminates E-Waste.

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# Engineering & Development

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Our team works directly with you to tailor and deliver supportive services to ensure efficient and success outcomes.





# Carbon Credit Platform

## **Global Innovator**

The most advanced and secure digital Renewable Energy Credit (REC) and Carbon Credit (CC) platform to fully automate the digital onboarding.

## **Digital Platform**

Users and their projects undergo an efficient vetting and approval process to ensure the highest level of security, transparency, and management.

## **Global Standards**

Credit issued from the platform meet the highest global standards and adhere to the IREC protocol.

## **Automated & Secure**

A simple API integration enables the platform to collect digital production data and analyze against IREC protocol standards for validation, certification, and decentralized digitization.

## **Transparency & Quality Assurance**

All steps in the credit life cycle are tracked, recorded, and visible through decentralized tokenization until the credit is retired.

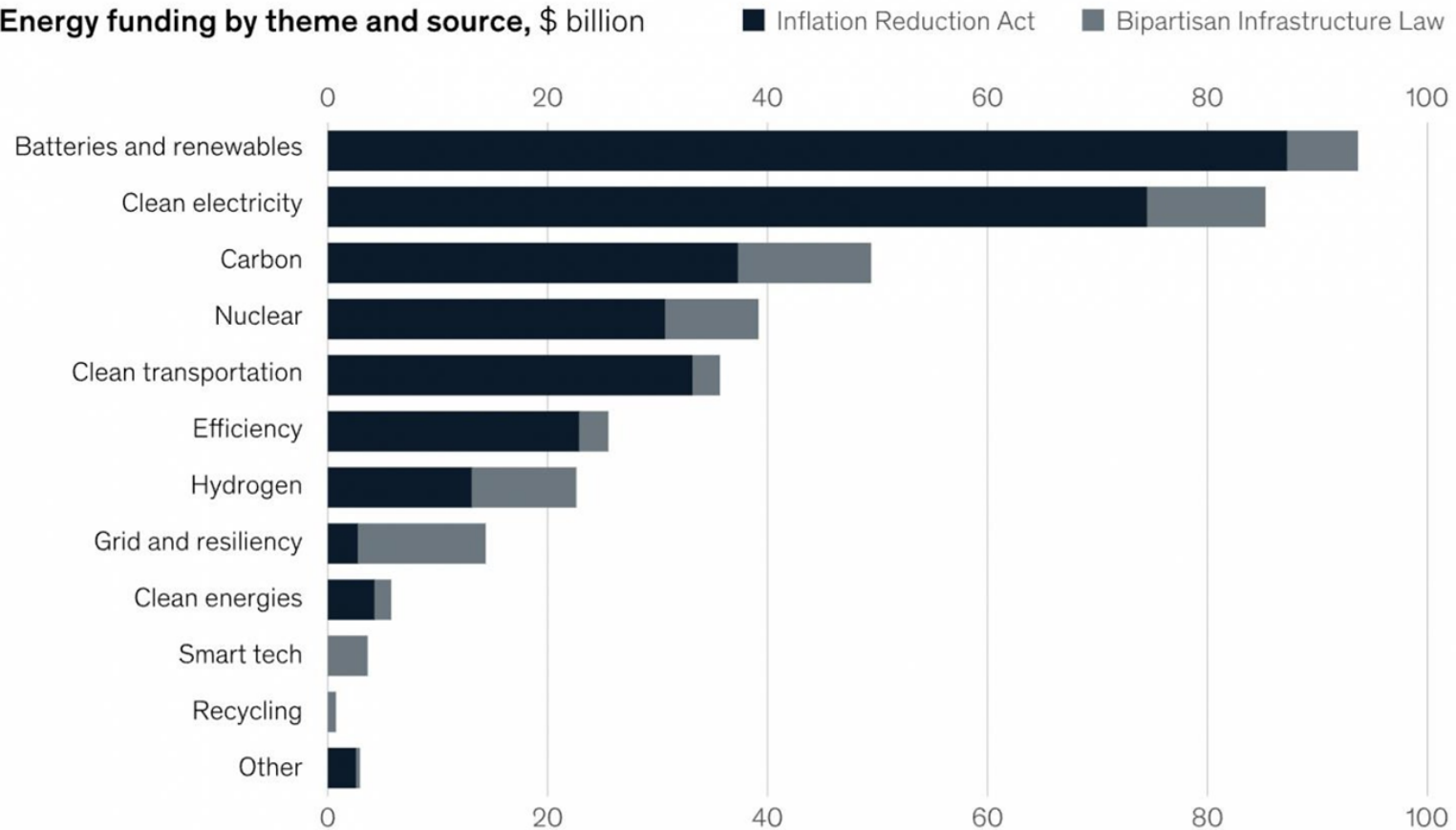
## **Profitability**

Because the program meets the highest global standard and is 100% traceable, credits can be sold into global markets for a premium over traditional USA, utilities or M-REC providers.

# Energy Funding by Theme

Energy funding from the Bipartisan Infrastructure Law and the Inflation Reduction Act spans major funding themes, totaling \$370 billion.

Energy funding by theme and source, \$ billion



# Tax Credit Benefits

Inflation Reduction Act (IRA)



Program	Credit	Clean Energy & Storage			
		Hydrogen	Solar	BESS	Solar + BESS
IRA Alternative Energy	30%	☑	☑	☑	☑
IRA Energy Transition Manufacturing Zone	10%	☑	☑	☑	☑
<sup>1</sup> IRA Domestic Content Bonus	10%	☑		☑	☑
USDA Rural Energy	50%	☑			

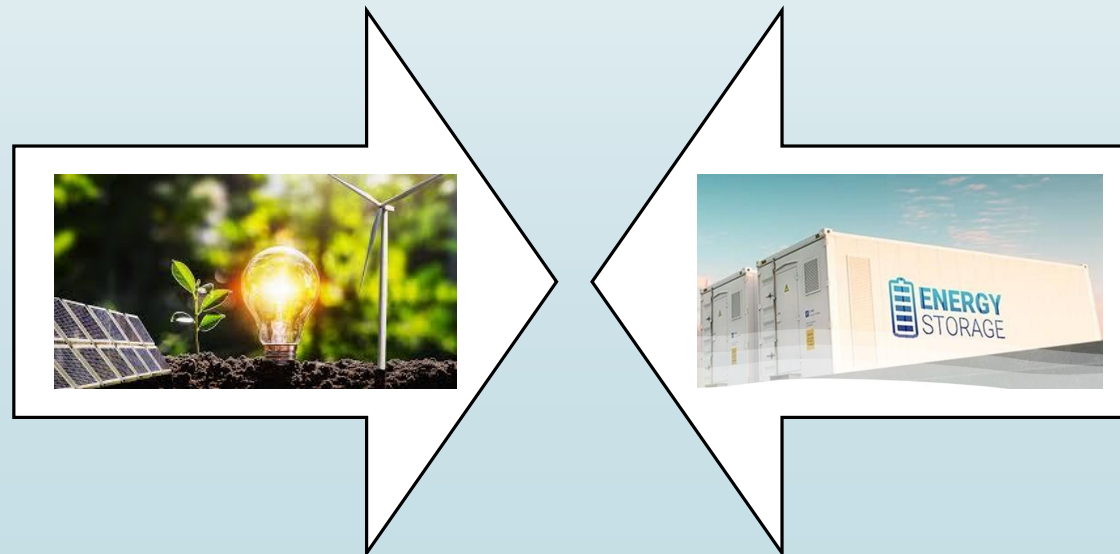
## NOTES:

- ✓ Solar + RESS, RESS 80% USA MANU can unlock foreign solar credit for domestic content.
- ✓ Programs and tax credits are based solely on a successful application and qualification by the applying party.

# Powering Renewable Possibilities Worldwide

## **CLEAN ENERGY**

The Wind Energy; and Advanced solar combined with hydrogen powered energy with solid oxide fuel cell technology delivers reliable, resilient, 24/7 onsite power with world leading efficiency for commercial, government and residential opportunities. It also applies to all renewable energies.





## TWR

Is committed to put all effort to make this project happen,  
commitment founded by our slogan,

"People Helping People"

We appreciate your valuable time



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