

Attached are three proposals for solar and battery and two for just the sale of battery. Let's discuss after your review.

1. Long Road (340 MW + 340 MWh BESS)
Lyra 1: Connects to IID S-line
100 MW PV + 100 MW BESS (2027)
Energy + RECs \$52.75/MWh
BESS \$16.90/kW-mo
Lyra 2: Connects to IID KN-KS line
240 MW PV + 240 MW BESS (2028)
Energy + RECs \$52.75/MWh
BESS \$16.90/kW-mo
2. RAI Energy (500 MW + 500 MWh BESS)
Wildcat Energy Farm Phase 1:
250 MW(PV) and 250 MWh (BESS)
Energy + RECs \$45.95/Mwh
BESS \$15.93/kW-mo
Wildcat Energy Farm Phase 2:
250 MW(PV) and 250 MWh (BESS)
Energy + RECs \$44.95/Mwh
BESS \$15.29/kW-mo
3. Private Energy Partners (500 MWh BESS)
500 MWh (BESS)
BESS \$21.98/kW-mo
4. Invinity (1320 MWh BESS)
5. Tesla (220 Megapacks X2L BESS)

Progress with Imperial Data Center

Lauren Edelman <lauren.edelman@longroadenergy.com>
To: Sebastian Rucci <sebastian@ruccilaw.com>
Cc: Hector Casas <Hector@ruccilaw.com>

Mon, Jul 28, 2025 at 3:02 PM

Hi Sebastian,

That's a great update. Glad to hear the good news on the SIS and that Google is interested in the project. We will take a deeper look at the study and let you know if we have any questions. We have prepared the attached overview of our projects in imperial with indicative pricing for our first phase, Lyra 1. We have included information on Lyra 2 as well.

Please consider the attached confidential and if you pass anything along to Google request the same from them.

We would happy to discuss further and brainstorm around different structures.

Best,

Lauren

--

Lauren Edelman

(732)-343-0856

From: Sebastian Rucci <sebastian@ruccilaw.com>
Sent: Monday, July 28, 2025 5:17 PM
To: Lauren Edelman <lauren.edelman@longroadenergy.com>
Cc: Hector Casas <Hector@ruccilaw.com>
Subject: Progress with Imperial Data Center

CAUTION: This email originated from outside the organization. If it contains a QR code, do not scan or use. Do not click links or open attachments unless you recognize the sender *and know the content is safe.*

[Quoted text hidden]

 **2025-07 Lyra 1 & 2.pdf**
1012K



LYRA 1 & 2

Longroad Energy

7/2025

CAISO IMPORT: LYRA 1

Lyra 1 is a late-stage 100 MW solar and storage project with full site control and County permits complete. Lyra 1 interconnects with Imperial Irrigation District.

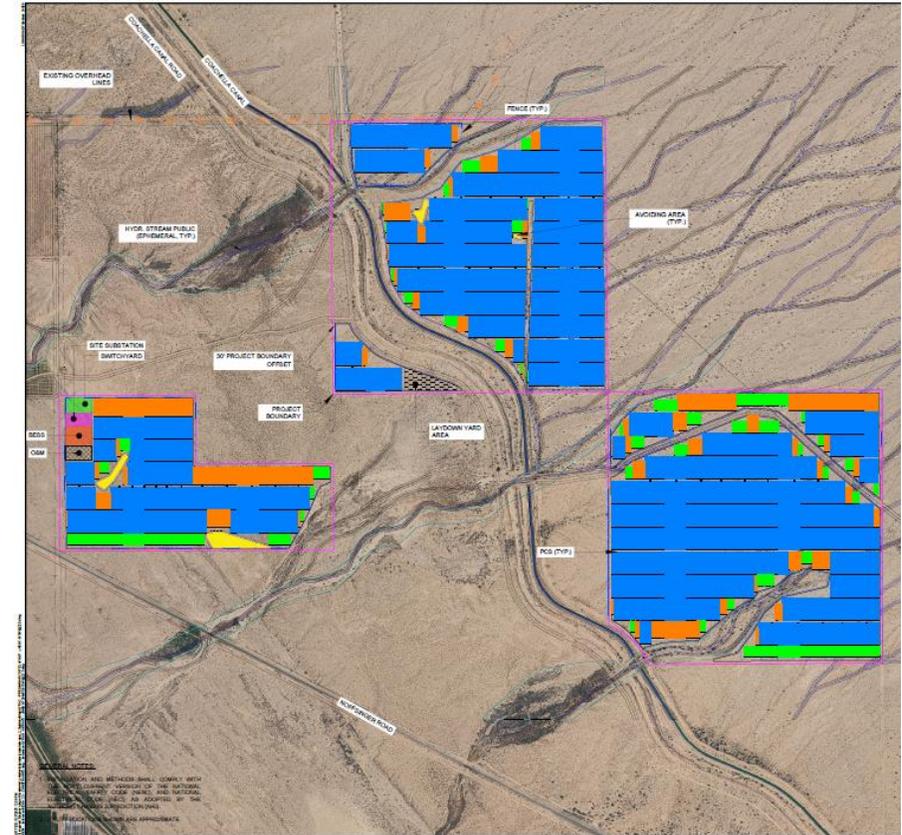
Location	<ul style="list-style-type: none"> Imperial County, CA
Nameplate	<ul style="list-style-type: none"> 100 MW PV + 100 MW BESS
Site Control	<ul style="list-style-type: none"> Option executed with private landowner
Permitting	<ul style="list-style-type: none"> Imperial County CUP complete CDFW and RWQCB permitting underway
Interconnection	<ul style="list-style-type: none"> POI: New 230kV switchyard on IID S-line Busbar delivery option for service to IID Project has also secured firm transmission from project POI to a CAISO delivery point CAISO proxy node: COACHELV_2_N101 CAISO delivery point: Mirage Grid-charging: Grid-charging was not studied in interconnection studies, but is available on a non-firm day-ahead basis Capacity Benefits: Lyra 1 can deliver RA if configured as a CAISO import from IID, and the offtaker would be responsible for securing MIC
Schedule	<ul style="list-style-type: none"> COD: 2027+
Tax Credits	<ul style="list-style-type: none"> Solar PTC and BESS ITC Project is safeharbored through the purchase of MPTs in 2025
Pricing	<ul style="list-style-type: none"> 100 MW PV + 100 MW x 4 hour BESS: 20 year busbar PPA: \$52.75/MWh + \$16.90/kwmo Assumes creditworthy counterparty and delivery to IID Assumes 12/2027 COD CAISO delivery option can be priced upon request



CAISO IMPORT: LYRA 2

Lyra 2 is a late-stage 240 MW solar and storage project with full site control and County permits complete. Lyra 2 interconnects with Imperial Irrigation District.

Location	<ul style="list-style-type: none"> Imperial County, CA
Nameplate	<ul style="list-style-type: none"> 240 MW PV + 240 MW BESS
Site Control	<ul style="list-style-type: none"> Option executed with private landowner
Permitting	<ul style="list-style-type: none"> Imperial County CUP complete BLM ROW issued CA: CDFW, RWQCB permitting underway Federal: BOR permitting underway
Interconnection	<ul style="list-style-type: none"> POI: New 230 kV switchyard on IID KN-KS line Busbar delivery option for service to IID Project has also secured firm transmission from project POI to a CAISO delivery point CAISO proxy node: COACHELV_2_N101 CAISO delivery point: Mirage Grid-charging: Grid-charging was not studied in interconnection studies, but is available on a non-firm day-ahead basis Capacity Benefits: Lyra 2 can deliver RA if configured as a CAISO import from IID, and the offtaker is responsible for securing MIC
Schedule	<ul style="list-style-type: none"> COD: 2028+
Tax Credits	<ul style="list-style-type: none"> Solar PTC and BESS ITC Project is safeharbored through the purchase of MPTs in 2025
Pricing	<ul style="list-style-type: none"> Pricing is available upon request





Sebastian Rucci <sebastian@ruccilaw.com>

Offer for power and capacity for Imperial Valley Data Center Campus

1 message

Mohammed Alrai <mohammed@raienergy.com>

Mon, Mar 17, 2025 at 3:41 PM

To: Sebastian Rucci <sebastian@ruccilaw.com>, Hector Casas <Hector@ruccilaw.com>

Cc: Mark Juergensen <Mark.Juergensen@raienergy.com>, Brent Lanyon <brent.lanyon@raienergy.com>, Kristina Jansen <kristina.jansen@raienergy.com>

Dear Sebastian,

As promised earlier, attached you will find the offer for power and capacity that we would like you to only share with Google for their consideration.

We would recommend having a conference call next week so we can understand Google's operational parameters for their data centers as we can offer blended rate to firm up our generation.

Please let us know if you questions.

Thank you,

Mohammed S. Alrai

President and Chief Executive



(408) 314-9967

mohammed@raienergy.com

www.raienenergy.com

 www.linkedin.com/in/alrai-mohammed/



1875 S. Bascom Ave
Suite 2400
Campbell, CA 95008

408-286-2393 
info@raienergy.com 
www.raienenergy.com 

Confidential: For Recipient with permission to share with Google

March 17, 2025

Mr. Sebastian Rucci
Imperial Valley Computer Manufacturing, LLC
Law Office of Sebastian Rucci, P.C.
16400 Pacific Coast Highway, Suite 212
Huntington Beach, CA 92649

RE: Wildcat Energy Farm project

Dear Mr. Rucci,

RAI Energy's Wildcat Energy Farm LLC is excited to provide this proposal to Imperial Valley Computer Manufacturing, LLC ("IVCM"). The Wildcat project will offer IVCM the following attributes including all Green Energy, Renewable Energy Credits, Energy Shifting, Capacity, Ancillary Services, Ancillary Service Capacity, and Resource Adequacy Benefits. IVCM is currently developing several data centers in Imperial County on behalf of Google, and RAI Energy would be an excellent partner in this endeavor.

RAI Energy is a California-based renewable energy development company with a proven track record of developing more than 2,000 MW of utility-scale and distributed generation solar and energy storage. IVCM knows us as the developer of the Vikings Energy Farm (online in 2024) which sells 100% of its power under a 20-year PPA with San Diego Community Power. We previously developed the Seville solar project, also in Imperial Valley. The Wildcat Energy Farm is a similar high-quality project in the same County.

Because of how RAI Energy is structured, we can provide tremendous flexibility regarding what we can offer and will work with IVCM to find an arrangement that would best suit the needs of its customer, Google. The proposed Wildcat Energy Farm Project is an overall 800 MW solar PV paired with an 800MW/3,200MWh (4 hours) Battery Energy Storage System ("BESS"). This will be one of the largest projects in California and therefore will be built in phases. We can offer IVCM the first phase which is expected to come online in 2027 with 250MWac PV and 250MW/1,000MWh BESS. The second phase is projected to come online in 2028 with the same configuration: 250MWac PV and a BESS capable of discharging 250MW for 4 hours. All batteries systems can be increased to 8 hours if needed.

On April 9, 2024, Wildcat received a favorable System Impact Study from Imperial Irrigation District ("IID") which triggers a process to complete and execute the Large Generator Interconnection Agreement ("LGIA") with IID along with the Transmission Service Agreement ("TSA") by the end of 2025. In addition, we kicked off our permitting process in Q4 2023 with feedback from Imperial County. We expect to finalize the permit approval by Q1 2026.



With that in mind, we would like to provide the following offers for the Wildcat project:

	Wildcat Energy Farm Phase 1
<u>Project Size</u>	250MW + 250MW/1000MWh energy storage (with option for 8hr duration BESS)
<u>Storage Duration (Hours)</u>	4
<u>PPA Term (Years)</u>	20 yrs for Solar / 20 yrs for Energy Storage
<u>Delivery P-Node</u>	ELCENTRO_2_N001
<u>COD</u>	12/31/2027
Pricing Solar (\$/MWh) - As Available	250MW – \$45.95 delivered at Wildcat’s Busbar
Pricing Energy Storage (4hr) Toll (\$/kW-mo)	250MW – \$15.93 delivered at Wildcat’s Busbar
Escalation Annual (%)	0%
Credit assumptions	Pricing based on credit rating of Google or equivalent with cash collateral being required if such credit rating is downgraded during the PPA Term.
IID Tariff Charges	100% of All charges from IID needed to deliver Wildcat energy and capacity to IVCN will be absorbed by the off-taker (i.e. Google)

	Wildcat Energy Farm Phase 2
<u>Project Size</u>	250MW + 250MW/1000MWh energy storage (with option for 8hr duration BESS)
<u>Storage Duration (Hours)</u>	4
<u>PPA Term (Years)</u>	20 yrs for Solar / 20 yrs for Energy Storage
<u>Delivery P-Node</u>	ELCENTRO_2_N001
<u>COD</u>	12/31/2028
Pricing Solar (\$/MWh) - As Available	250MW – \$44.95 delivered at Wildcat’s Busbar
Pricing Energy Storage (4hr) Toll (\$/kW-mo)	250MW – \$15.29 delivered at Wildcat’s Busbar
Escalation Annual (%)	0%
Credit assumptions	Pricing based on credit rating of Google or equivalent with cash collateral being required if such credit rating is downgraded during the PPA Term.
IID Tariff Charges	100% of All charges from IID needed to deliver Wildcat energy and capacity to IVCN will be absorbed by the off-taker (i.e. Google)

Proposal Assumptions:

- The project will be eligible for 40% Incentive Tax Credit (base ITC at 30% plus domestic content at 10%).
- Current tariffs are incorporated in the offered pricing and any major changes to the tariffs will need to be discussed.





Firmed On-Peak Options:

RAI Energy would like to provide a blended rate if it is helpful to Google's data center operations, but calculating a blended rate would require a discussion regarding operational parameters; specifically the expected amount and shape of megawatt hours that would be used by the data centers.

Long Duration Energy Storage (8 hour):

Wildcat Energy Farm will build up to an 800 MW / 3200 MWh energy storage facility adjacent to the solar project. We have the space and capacity to build longer duration energy storage up to 8 hours.

We would like to schedule a conference call during the week of March 24th or earlier to address any questions, clarifications or modifications about this proposal with the team at Google.

Please advise on the availability of your team and Google's team for a conference call. We look forward to the next steps.

Sincerely Yours,

Mohammed S. Alrai

Mohammed S. Alrai
President & CEO

Imperial Valley energy for Data Centers

Stephen Thome <st@private-energypartners.com>

Mon, Aug 25, 2025 at 2:54 PM

To: Sebastian Rucci <sebastian@ruccilaw.com>

Cc: Tom DuBose <tom@dubosedesigngroup.com>, Sebastian Rucci <Sebastian@rucci.law>

Sebastian,

I just got a refresh on our pricing on Friday. These are all indicative numbers, based on current procurement quotes and tariff rates.

The cost of a four-hour BESS system is \$21.98 per kW-mo using Tesla and US made modules. I would assume that we would attempt a double cycle in the summer to minimize on peak energy charges.

Just working of the published IID TOU Large General Service Tariff, the all-in cost of power with the BESS is about \$116/MWh. This is an improvement over the \$155/MWh all-in cost that IID would charge without the BESS.

IID might be willing to work out a lower cost solution based on market purchases from the California ISO.

We are trying to get a quote for market hedge. In either event, IID has the first right to serve the load.

Steve



Stephen Thome
Chief Development Officer

m: +1 847-460-2222

e: st@private-energypartners.com | www.private-energypartners.com

a: [444 West Lake Street, 17th Floor, Chicago, Illinois 60606](#)

Consider the environment. Do you really need to print this email?

This message contains confidential information and is intended only for the intended recipients. If you are not an intended recipient you should not disseminate, distribute or copy this e-mail. Please notify the sender immediately by e-mail if you have received this e-mail by mistake and delete this e-mail from your system. E-mail transmission cannot be guaranteed to be secure or error-free as information could be intercepted, corrupted, lost, destroyed, arrive late or incomplete, or contain viruses. The sender therefore does not accept liability for any errors or omissions in the contents of this message, which arise as a result of e-mail transmission. If verification is required please request a hard-copy version.

From: Sebastian Rucci <sebastian@ruccilaw.com>

Sent: Thursday, August 21, 2025 3:49 PM

To: Stephen Thome <st@private-energypartners.com>

Cc: Tom DuBose <tom@dubosedesigngroup.com>; Sebastian Rucci <Sebastian@rucci.law>

Subject: Re: Imperial Valley energy for Data Centers

Data Center BESS Proposal

1 message

Colin Boone <cboone@invinity.com>

Fri, Aug 29, 2025 at 4:56 PM

To: Sebastian Rucci <sebastian@ruccilaw.com>

Cc: Amartya Chattopadhyay <achattopadhyay@invinity.com>, Johanna Castaño <jcastano@invinity.com>

Hello Sebastian,

Please find attached a proposal for the support of a 330 MW load data center. We've proposed a four hour battery, which can also be used for other applications like arbitrage, frequency response, etc. Included you will our assumptions and prices associated with the delivery of a battery that will qualify for the US ITC domestic content add of 10%.

We have a long weekend with Monday being labor day and we are happy to jump on a call at your convenience later in the week.

All the best.

Cheers – Colin

Colin W. Boone

Vice President Sales

cboone@invinity.com

(o) +1 650 439 1193

(m) +1 425 241 8049



 **Imperial Computer - Invinity Data Center Baseline Proposal - 20250829.pdf**
5755K



ENDURIUM Proposal

**330 MW / 4 hr MWh accounting for
AUX (Battery DC)**

**Imperial Valley Computer Manufacturing,
LLC - Data Center Baseline VFB**

AUGUST 2025



Invinity Energy Systems

- A global leader in **non-lithium energy storage systems**
- Standardized, **factory-built** products
- **More than 1,500** flow batteries delivered globally
- **Largest** flow battery installations in Canada, UK, U.S., Australia
- **Joint development & commercialisation partner**  GamesaElectric

Global Footprint
190 MWh



Viejas Microgrid
10 MWh / Alpine, CA



Spencer Energy
8 MWh / South Australia



Elemental Energy
8 MWh / Alberta, Canada



90+

PROJECTS

Across 14 countries on 5 continents

190

MWh

Deployed, contracted or awarded

5.4+

GWh

Dispatched since 2022 from Invinity batteries

158

EMPLOYEES

The most experienced team in flow batteries

81

PATENTS

Granted or pending, plus trade secrets

15+

YEARS

R&D investment in product and manufacturing

Invinity's Global Operations



VANCOUVER
Design & Manufacturing



MOTHERWELL
Manufacturing



BATHGATE
Design & Manufacturing



LONDON
Sales & IR



VISTA
Support



SUZHOU
Manufacturing



SAN FRANCISCO
Sales & Support

Executive Summary

Invinity Vanadium Flow Batteries (VFB) proposed to provide support for the full Data Center load for 4 hours.

Because there is no limit to number of cycles nor rest periods between charge or discharge events. The battery can be used for multiple applications stacked throughout a day, week, year or lifetime.

The battery life and support services are quoted for 25 years of use.

The pricing is for total delivery to meet standards for the ITC US Domestic Content adder of 10%.

Invinity's VFB poses no fire or explosion risk and is easy to permit.

Because cooling is simple forced air the product is quiet.

Data Center Storage: 330 MW / 1320 MWh

The following information has been used to calculate the pricing for an LDES solution that delivers circa 330 MW-dc for a 4 - hour discharge duration throughout a up to 30-year asset life.

The indicative proposal is to provide a baseline Invinity Vanadium Flow Battery (VFB) to support a 330 MW load data center.

Basis Of Project Solution and Pricing		Proposed ENDURIUM Solution	
Imperial Valley Computer Manufacturing, LLC	Data Center Baseline VFB	Number of Arrays	68 Arrays
Project Requirements	330 MW / 1320 MWh accounting for Aux	Strings per Array	68 Array(s) of 16 Strings
Customer Point of Measure	Battery DC at BOL (Rated)	Number of Strings & Modules	1088 Strings (4352 Modules)
Project Site Location	California USA	Power Block Configuration	3 Power Blocks (see datasheet)
Delivery terms	DAP - Imperial Valley, CA	VFB Sizing	348.2 MW / 1457.3 MWh (Nameplate at Battery DC)
Contracting Date / NTP	(Q1 2026) / (Q1 2026)	System Maximum Values	217.7MW / 1504.2 MWh
First Delivery / Final Delivery	(August 2027) / (November 2027)	Charge Time (Nominal and Max)	6.5 hours and 9.3 hours
Commercial Operation Date	Q4 2027	Discharge Time (Nominal and Max)	4.6 hours and 7.3 hours
		Recommended PCS	Gamesa Proteus 3150E
		Stacking height	Double Stacked
		Estimated footprint	13.8 Acres

Pricing – Valid for Delivery Date : Q3 2027

Item	Description	Unit Price	Qty	Amount
Capex - Battery System Products				\$370,681,545.09
1	Invinity Endurium Strings	339,499.93	1088	\$369,375,920.09
2	Endurium Control Equipment	19,200.37	68	\$1,305,625.00
Capex – Optional Products & Services				\$57,684,100.80
3	Indicative Price for (PCS+MVT) - Gamesa Proteus 3150E	326,695.60	68	\$22,215,300.80
4	Logistics: Estimated Equipment Delivery - DAP - Imperial Valley, CA	0	0	\$25,132,800.00
5	Remote Installation Support and On-Site Commissioning (excl. T&E)	9,500.00	1088	\$10,336,000.00
Capex – Total				\$428,365,645.89

Item	Description	Unit Price	Qty	Amount
Opex - Included Items				
6	1 Year Standard Manufacturer's Product Warranty			Included
Opex - Optional Items (per annum)				\$7,357,458.08
7	25-Year LTSA (Years 2-25) (Estimate Only) (Years 11-25 are estimates only) (Annual payment)	3,764.21	1088 Strings	\$4,095,460.48
8	Extended Parts Warranty (Annual Payment)			\$3,261,997.60

Key Pricing Assumptions

- Endurium VFB USD 253.5 / kWh
- All Prices in USD
- Project COD Q4 2027
- Equipment delivered up to Q3 2027
- PCS pricing based on partner quotes
- Finishing factory split between US and Canada or United Kingdom
- Extended Parts Warranty is required for LTSA

Alternative Pricing Options Available

- Longer duration configurations (8-16 hours)
- Smaller or larger configuration.

Pricing is indicative and subject to assumptions and terms in appendix

Invinity Warranty

Warranty Summary

Invinity provides a manufacturer's 12-month warranty from the commissioning certificate date with an option to extend for up to 30-years.

Warranty Characteristics

Allowed Cycles	Unlimited
Allowed Energy Throughput	Unlimited
Extended Warranty Lifetime	Up to 30 years
Allowed Depth of Discharge	100%
Operational Monitoring	Optional
All Invinity Components	Stacks, pumps, electrolyte & all consumables within the Invinity systems are covered

Invinity offers an extended warranty valid from the commissioning certificate date.

Extended warranties include both product and performance guarantees.

A service agreement (exclusive from the sales price) is required to match the duration of any extended warranty. This covers routine maintenance and works to fulfil the warranty. The service agreement will be provided by the Client or a third-party contractor in accordance with Invinity's manuals with training and remote support provided by Invinity.

Guarantees

Invinity provides both a product and a performance guarantee. The manufacturer's warranty term is for one year.

Product Warranty

Invinity warrants that the system shall be free from material defects in design, materials and workmanship for the duration of the warranty term.

Performance Warranty

Invinity warrants that the system shall conform in all material respects to the following specifications for the duration of the warranty term.

Rated Power	There shall be no degradation in the rated power of the system over the warranty term.
Roundtrip Efficiency	The roundtrip efficiency of the system shall not degrade more than 0.1% per calendar year, irrespective of usage and cycling.
Rated Energy	Delivered energy of the system shall not degrade more than 0.2% per calendar year irrespective of usage and cycling.

Invinity will provide replacement components under warranty (dictated by internal performance monitoring) to restore the energy capacity of individual BESS modules as required to meet the warranted energy capacity degradation, roundtrip efficiency and rated power performance warranties.

Warranty Terms

Invinity warrants that its products conform to Invinity specifications and are free from defects provided that Invinity's operation and maintenance instructions are followed.

Invinity will, at its own cost repair, replace or otherwise make good any defects in the system notified by the Customer during the warranty term.

Invinity may provide spare parts and components to the Customer site in accordance with the maintenance schedule and site size.

The Customer shall perform the standard maintenance procedures on the system as per Invinity's manuals.

The rated energy, rated power and roundtrip efficiency of the system shall be tested / calculated on an annual basis following Invinity's testing protocol.

Invinity shall not be liable for any failure of a system component where the failure has been caused by testing, installation, repair, mishandling, accident, misuse, operations and / or environmental conditions outside of those specified in Invinity's manuals.

Third party products, like the Power Conversion System (PCS), carry their own warranty and are excluded from Invinity's.

Contracted warranty terms are outlined within the Invinity Contract of Sale.

Pricing Assumptions and Terms

- Prices are indicative and valid for 30 days from issue.
- Pricing subject to the terms and conditions of a Supply Agreement to be negotiated and executed between Parties.
- Price is based on the project delivery(s) indicated.
- Battery System Products and Estimated Equipment Delivery assumed split deliveries from a US and other factory(s).
- Delivery schedule to be agreed in advance of order execution and in coordination with an EPC plan.
- Prices are for Invinity BESS components and services only. Quote is inclusive of PCS, exclusive of EPC and EMS.
- Invinity does not provide civil works, installation services or additional electrical components.
- Quote and ENDURIUM configuration assumes integration with Gamesa 3150E PCS.
- Other Invinity certified PCS may be selected but may impact proposed ENDURIUM sizing and configuration.
- If engineering support is needed for alternative PCS or EMS integration, additional costs will be quoted separately.
- Onsite commissioning is exclusive of travel & expenses, which will be billed at cost plus 10%.
- Standard manufacturer's warranty for Invinity products is 1 year.
- If desired, training is available at an Invinity training center in California or Canada and shall be quoted separately.
- Annual LTSA services will be invoiced and paid prior start of service year. LTSA fee will increase annually in line with CPI.
- Invinity reserves the right to re-quote if the exchange rate fluctuates more than 3%.

Standard Division of Responsibilities

	Invinity	Customer
Design, Network, Planning and Studies		
Pre-installation, network, planning and site-specific services (including grid connection applications, site permitting, planning applications, environmental, flood and earthing studies). Customer shall notify Invinity if studies show risks to safety, operation & lifetime of the Invinity VFB plant.		✓
Provide Single Line Diagram from Invinity VFB to Invinity Point of Connection including all Invinity design documentation and requirements for non-Invinity supplied interfacing components (i.e. cable ratings, electrical supply characteristics).	✓	
Site & project specific engineering design including site layout, cable management, DC and AC electrical design, site SCADA and provide full site Single Line Diagram including Invinity VFB.		✓
Site Preparation, Civil Works & Pre-Delivery		
Provide all required civil work, cable management, site fencing & access barriers where required along with site elevation drawings including detailed cable management drawings post Invinity points of connection.		✓
Provide permanent internet connection with ethernet connection to the VFB (WAN) for remote service and monitoring (minimum 10 Mbps).		✓
Provide required access to site and suitable road for heavy vehicles to deliver equipment and provide a foundation suitable for heavy vehicles for lifting & positioning of equipment.		✓
Provision of an external 480V 3-phase auxiliary supply for the batteries and PCS.		✓
Delivery, Installation & Commissioning		
Installation of all equipment (including Invinity VFBs, cabling and ancillary components to connect provided equipment from VFB to Invinity Point of Connection).		✓
Remote commissioning support of the Invinity VFB along with the provision of a set of as-built drawings, Installation, Operations and Health and Safety manuals for the Invinity VFB.	✓	
On-site commissioning activity and overall site integration works.		✓
Responsibility for overall site design, installation, project management and commissioning of overall project.		✓
Provide O&M contractor training with comprehensive remote support along with Invinity system performance remote monitoring under warranty.	✓	

ENDURIUM™

Introduction to ENDURIUM

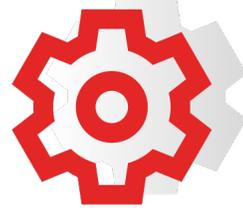


The World's Most Proven LDES Battery Technology

ENDURIUM™ delivers best-in-class non-lithium LDES technology performance:



**75% DC RTE
15 ms Response**



**Reduced O&M
Streamlined Commissioning**



**Up to 100 MWh /
Acre**

Fundamental advantages of Invinity's VFB technology:



**Fire Safe
and Quiet**



**No Cycle-Driven
Degradation**



**Configurable and
Scalable**



99% Recyclable

<p>RATED POWER: CONTINUOUS</p> <p>3-250+ MW</p>	<p>ENERGY STORAGE: NOMINAL</p> <p>12-1000+ MWh</p>	<p>ENERGY STORAGE: DURATION</p> <p>4-18 HOURS</p>
<p>AVAILABLE DEPTH OF DISCHARGE:</p> <p>100%</p>	<p>CYCLE LIFE: UNLIMITED</p>	<p>LIFETIME: UP TO 30 YEARS</p>

DNV Bankability Report

- Third party product and company review
- Available under NDA

ENDURIUM™ delivers

- Reduced construction risk
- Easier planning and permitting
- Long-term performance capabilities
- Flexibility to address current and future market opportunities



IN 2026

STRING SPECIFICATION

COMPONENTS

4x Vanadium Flow Battery Modules, 1x String Control Unit, Inter-String cabling

PERFORMANCE¹

	2 Power Blocks	3 Power Blocks
Max DC Power	300 kW	375 kW
Max Usable Energy ²	1310 kWh	1370 kWh
Discharge Durations at Constant Power	4h @300 kW 8h @160 kW 10h @130 kW 12h @110 kW	4h @310 kW 8h @170 kW 10h @ 140 kW 12h @120 kW
Max DC RTE	74%	75%
Max Total RTE	69%	70%
DC Response Time	<15 ms from On; <1 min from Off	
Voltage Range	800–1280 VDC	
Max DC Current	406A	

OPERATING CAPABILITIES

Duty Cycle	Continuous at Max Power. No rest period
Lifetime Cycles	Unlimited for 25 years
Depth of Discharge	0-100 %
Cooling System	Forced Air
Communications	Modbus TCP/IP
Annual Energy Degradation	<0.2%

REQUIRED UTILITIES

Auxiliary Supply	3 ϕ , 380-480 VAC
Auxiliary Loads (Average/Max) ³	7 kW / 45 kW

CERTIFICATIONS AND STANDARDS (Expected In 2025)⁴

Certifications	CE, UL 1973, UL 9540A, Sub Assembly under UL 9540
Standards	NFPA, IEC 62933-5-2, IEC 62485, IEC 62932-2-2

ENVIRONMENTAL

Ambient Operating Temperature	-10°C to 45°C / 14°F to 113°F
Relative Humidity	5-95%
Maximum Elevation	2000 m / 6600 ft
Protection Class	IP 54

FOOTPRINT

String Footprint (inc/service access)	8.7m x 10.9m / 28 ft x 36 ft
Area	93.7 m ² / 1008 ft ²
Energy Density	96 MWh/Acre

BATTERY MODULE DIMENSIONS (4 PER STRING)

Dimensions	6.1 m x 2.4 m x 2.6 m 20 ft x 8 ft x 8.5 ft
Mass	27,500 kg / 61,000 lbs

NOTES: 1 Performance values are for operation with electrolyte at 35°C. DNV IE Study available under NDA. Contact Invinity for more information.
 2 Usable DC capacity varies depending on discharge profile.
 3 Aux load excludes cooling fans, which are temperature dependant.
 4 Only the core list of codes and compliance is provided. Contact Invinity for the compliance status of codes not referenced.

ENDURIUM™



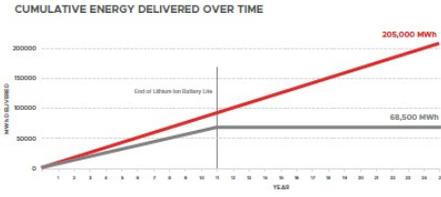
INVINITY ENDURIUM™ ENERGY STORAGE SYSTEM

Invinity's ENDURIUM™ is an evolution of our proven modular vanadium flow battery technology, engineered for greater energy density, simplified maintenance, and greater economic value. At its foundation is a String of four ENDURIUM Modules – a UL certified flow battery that stores 1.35 MWh of usable energy and can be fully discharged in 3 hours, or as long as 18 hours based on the application. Strings are connected together into Arrays sized to optimally pair with the inverter. ENDURIUM Arrays can be combined to create 100 MW+ solutions that deliver unmatched throughput and flexibility.

- **MORE THROUGHPUT** Non-degrading chemistry delivers throughput superior to most stationary storage today.
- **MORE FLEXIBILITY** Adaptability to a wide range of duty cycles, with no warranty limits on cycle count.
- **MORE LIFETIME** Suitable for 25+ years of constant cycling, matching the lifespan of solar & wind assets.

- **MORE SAFETY** Zero risk of thermal runaway; exceptional personnel safety for crews & first responders.
- **MORE SUSTAINABILITY** 99% of components are recyclable; vanadium electrolyte reusable at battery EOL.
- **MORE INSIGHT** Unparalleled visibility to system performance to understand and optimize asset performance.

CUMULATIVE ENERGY DELIVERED OVER TIME



Assumptions: 12 MWh capacity installed, 2 cycles per day, 100% DoD per cycle, 365 days a year.
 Lithium end of inventory (EOL) at 100% capacity.
 We charitably assume the lithium system can meet this duty cycle; its actual degradation is likely to occur much faster.

SCALABLE
3-100+
MW POWER

3-18
HOUR DISCHARGE

UNLIMITED
CYCLES

UNLIMITED
THROUGHPUT

NON
FLAMMABLE

25+
YEAR LIFESPAN

Endurium String

- 4 x Modules and 1 String Control Unit (SCU)
- Each module is a factory-built vanadium flow battery
- Modules are stackable to increase energy density
- Power can be configured based on use case



Endurium Array

- Collection of 8-20 Strings with an Invinity Array Control.
- ACU connected to 3rd Party PCS for charging and discharging
- Array layouts are standardised for EPC efficiency but can be customised to adapt to a site



Endurium BESS

- One or more Arrays and PCS aggregated together behind an interconnection or meter
- Controlled via an Invinity System Controller, with overall control by a 3rd party EMS
- Sizing and configuration based on the required use case and location



Invinity's batteries are highly recyclable with high residual value.

- Vanadium electrolyte fully reclaimable and reusable at EOL
- Most battery components can be recycled
- Low impact of incremental storage duration

Material Composition

The battery module is primarily made of:

- Steel
- Plastics (largely polyethylene)
- Power Electronics
- Cell Stacks
- Electrolyte

Steel and plastics can be easily recycled through conventional channels. Power electronics can be processed alongside other consumer electronics.

Depending on the condition, cell stacks may be recovered and can be reused in future systems.

Electrolyte

The electrolyte typically makes up ~40% of the costs of a ENDURIUM System.

At end of life, the Vanadium Electrolyte can be:

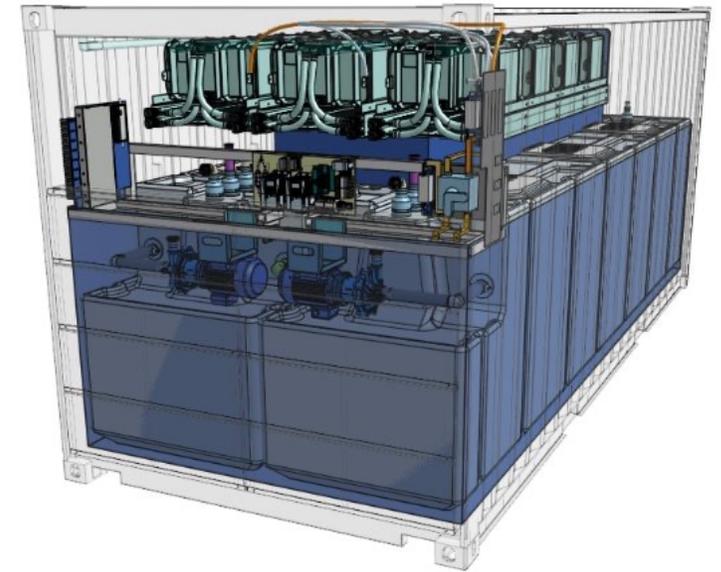
- a) Reconditioned for use in another energy storage project, or
- b) Processed to recover the Vanadium metal (>95% recovery rate).

This means that the electrolyte retains a high residual value, which can be recovered at project end of life.

Decommissioning and Disposal

There are no products or by-products within the ENDURIUM Battery Module that require special disposal during decommissioning.

The residual value of the electrolyte and scrap materials within the ENDURIUM Battery module exceed the disposal costs.



Project Experience

Invinity has been deploying grid and large scale C&I project of increasing size

Select List of Awarded & Deployed Projects

Project	Location	Deploy Date	Size	Project Partners
OCED Utility Pilot (US)	Confidential	2026	72 MWh	National Renewables Cooperative Organization, US DOE Office of Clean Energy Demonstrations
Utility Pilot	Taiwan	2026	14 MWh	Everdura
DOE LDES Demonstrator	Confidential	2026	14 MWh	Department of Energy, PNNL
FOM Merchant	Hungary	2026	11 MWh	Confidential
Market Services Pilot (UK)	Confidential	2025	30 MWh	UK Department of Energy Security & Net Zero, Confidential Tier-One Renewables Developer
Viejas Microgrid	California, USA	2024	10 MWh	California Energy Commission, Viejas Band of Kumeyaay Indians, Indian Energy
Rincon Microgrid	California, USA	2024	4 MWh	California Energy Commission, Rincon Band of Luiseño Indians, PowerFlex EDF Renewables
Spencer Energy	South Australia	2023	8 MWh	Yadlamalka Energy, ARENA
Chappice Lake Solar + Storage	Alberta, Canada	2023	8 MWh	Elemental Energy, Cold Lake First Nations, Emissions Reduction Alberta
Energy Superhub Oxford	Oxford, UK	2022	5 MWh	EDF Renewables, City of Oxford

Our track record of successfully partnering on winning proposals includes securing funding from:



 **GET MORE
BATTERY™**

 **INVINITY**
ENERGY SYSTEMS



PRICE PROPOSAL

Date of quote 6 Aug 2025
Customer Imperial Valley Computer Manufacturing, LLC

Project Name Inland Empire Data Center
Quote Name Example data center
Nameplate Apparent Power 451,000 kVA
Nameplate System Power 423,984 kW
Nameplate System Energy 847,968 kWh
Delivery Quarter Q1'27
Term 15 Years
Incoterm DDP
Megapack Count 220
Megapack Model MP2XL 2H

CAPEX price	USD (excl. Sales tax)
Megapack system	213,700,265.87
Megapacks	200,400,000.00
Site-level parts	26,799.69
Other Megapack system	13,273,466.18
Logistics	1,222,222.22
Logistics	1,222,222.22
Engineering/Commissioning	754,169.00
Commissioning	754,169.00
Total CAPEX	215,676,657.09
Total CAPEX per kWh	254.30
Megapack system per kWh	252.01
Logistics per kWh	1.44
Engineering/Commissioning per kWh	0.89

OPEX price	USD (excl. Sales tax)
Megapack Preventative Maintenance	555,291.18
Preventative Maintenance	555,291.18
Total OPEX - year 1	555,291.18
Total OPEX - year 1 per kWh	0.70