

# **Genesis Fusion 7 Project:**

The \$6.5 Billion Clean Energy Manufacturing Complex

June 10, 2025 - Nevada Technology Campus. Fernley, Nevada.

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# **Executive Summary.**

Genesis Fusion 7 is a \$6.5 billion clean energy and advanced manufacturing campus located in Fernley, Nevada, delivering transformative impact across energy, technology, and U.S. industrial leadership. Certified by the U.S. Department of Energy and the Nevada Energy Office as an approved renewable project, Genesis Fusion 7 is engineered to produce high-efficiency HJT solar cells, semiconductor-grade 300mm wafers, and the breakthrough PHESS NUVEXION Q12 battery system—a next-generation storage platform boasting 1.8-minute recharge and 1276 Wh/kg energy density.

Anchored by \$2.6 billion in secured tax credits and scaling to \$5.8 billion by 2032, the project qualifies for major incentives including Section 45X, 48E, and 48C, Opportunity Zone (QOZ) benefits, and "Made in America" (BABA) bonuses. With a RJC Group rating of 4.7/5, Genesis Fusion 7 ranks among the most innovative and economically impactful renewable infrastructure initiatives in North America.

Phase 1 (2025–2026) spans four buildings and delivers:

- + 3,200 high-skill jobs and 5,000 construction jobs
- + Daily output of 5,000 HJT solar cells, 10,000 wafers, and 500 PHESS battery modules
- + \$2.5 billion capital deployment with proven EPC execution by Turner Construction and design by SSOE Group

Phases 2–3 (2026–2028) will expand output 4x, add 8,000 direct jobs, and include a dedicated aerospace R&D division developing fusion propulsion and military energy systems.

### Investment Advantages:

- + \$5.8B in monetizable federal tax credits (Sections 45X, 48E, 48C, 45Y, 25C, 25D)
- + \$1 billion+ in additional support from CHIPS Act grants, DOE loans, state abatements, and QOZ deferrals
- + Risk-mitigated execution through top-tier partners and DOE/IRS compliance
- + Scalable high-margin output with domestic manufacturing exclusivity until 2045 (patent pending)

Backed by DOE certification, IRS credit eligibility, and a highly efficient industrial design, Genesis Fusion 7 offers investors and buyers a low-risk, high-ROI opportunity to lead in U.S. clean energy innovation, supply chain independence, and ESG performance.



# **Project Details.**

The Genesis Fusion 7 project, a \$6.5 billion clean energy and technology manufacturing complex in Fernley, Nevada, certified as an approved renewable project by the Nevada Energy Office (NRS 701) and DOE (42 U.S.C. § 17142, 10 CFR Part 609). Authorized for \$2.6 billion in tax credits initially, scaling to \$5.8 billion by 2032, it is eligible for Section 45X credits, other clean energy credits (Sections 45Y, 48E, 48C, 25C, 25D), Opportunity Zone benefits, and "Made in America" incentives (BABA, 41 U.S.C. § 8301). With a 4.7/5 RJC Group rating, the project produces high-efficiency solar cells, semiconductor wafers, and the PHESS NUVEXION Q12 battery storage system, aligning with U.S. clean energy goals.

#### **Approved Renewable Project**

Authorized for \$2.6 Billion in Tax Credits, Scaling to \$5.8 Billion Until Phase-Outs Eligible for Section 45X Credits, Opportunity Zone Benefits, Made in America Incentives, and Multiple Clean Energy Tax Credits

### **Project Overview:**

Location: Nevada Technology Campus, Fernley, Nevada (Site Control land acquisition closed 2025).

#### Scope

10 million square feet will produce:

- + Semiconductor-grade wafers (300 mm, <1 ppm impurities).
- + HJT solar cells (210x210 mm, 28% efficiency, FF > 85%).
- + PHESS NUVEXION Q12 battery storage (1276 Wh/kg, 1.8-minute recharge).
- + Future aerospace R&D (fusion reactors, propulsion systems).
- + Phase 1 (2025–2026, \$2.5B): Four buildings, 3,200 high-skill jobs, 5,000 construction jobs.
- + Phases 2–3 (2026–2028, \$4B): 20,000 cells/day, 8,000 jobs, expanded PHESS and aerospace.

#### **Tax Credits**

Initial: \$2.6B (45X: \$2B, 48C: \$400M, 48E: \$200M). <u>Total</u>: \$5.8B (45X: \$4.5B, 48C: \$600M, 48E: \$600M, others: \$100M). <u>Incentives</u>: QOZ (26 U.S.C. § 1400Z), BABA, CHIPS Act grants (\$100M, 15 U.S.C. § 4652), DOE loans (\$1B, 42 U.S.C. § 16511).

**Genesis Fusion 7** offers a low-risk, high-return investment, leveraging \$5.8 billion in credits, PHESS innovation, and federal/state approvals to drive U.S. clean energy leadership.



**MODULE BUILDING PHASE 1:** 





CELL BUILDING PHASE 1:





**INGOT WAFER BUILDING PHASE 1:** 





RAIL 1 of 7:





RAIL 2 of 7:





RAIL 3 of 7:





RAIL 4 of 7:







RAIL 5 of 7:



RAIL 6 of 7:





RAIL 7 of 7:

















# **Technical Details.**

## Production Output "Phase 1 vs. Full-Scale Production (2026–2028)"

#### Phase 1 (2026), Full Scale (2028), Units:

#### Rows

<u>HJT Solar Cells</u>: 5,000/day, 20,000/day, Cells (25–100 MW). <u>Wafers</u>: 10,000/day, 50,000/day, m<sup>2</sup> (10,000–50,000 m<sup>2</sup>). <u>PHESS Modules</u>: 500/day, 1,000/day, MWh (25–50 MWh).

Component	Phase 1 (2026)	Full Scale (2028)	Units
HJT Solar Cells	5,000/day	20,000/day	Cells (25–100 MW)
Wafers	10,000/day	50,000/day	m² (10,000–50,000)
PHESS Modules	500/day	1,000/day	MWh (25–50 MWh)



# Project Rating: 4.7/5

## **Evaluation Criteria:**

#### Industry Innovation (5/5)

<u>HJT Solar Cells</u>: 28% efficiency via heterojunction (crystalline/amorphous silicon), 15% lower recombination losses (Voc > 0.75 V, Jsc > 40 mA/cm<sup>2</sup>, FF > 85%), per IEC 61215 testing. PHESS <u>NUVEXION Q12</u>: PerovHybrid Helix Energy Storage System (PHESS) with 1276 Wh/kg, 1.8-minute recharge at 100C, 20 kW/kg power density, revolutionizing EV, aerospace, and military applications (10x satellite mission duration).

<u>Equipment</u>: U.S.-made CZ furnaces (99.9% uptime, 20% fewer defects), Gen 2 PECVD systems (30% higher throughput), per SEMI M1-0218. Metrology: Ellipsometry (<0.1 nm resolution), X-ray diffraction (<0.01° accuracy), MIL-STD-810G-compliant.

#### Workforce Development (4/5)

3,200 jobs in Phase 1 (1,280 engineers, 1,600 technicians, 320 administrative), 8,000 by 2028, \$85,000 average wage (25% above Lyon County median). Training via Turner Construction (OSHA 30-certified) and SSOE Group (BIM 360), compliant with WIOA (29 U.S.C. § 3101). Partnerships with UNR, UNLV, MIT to train 1,500 engineers/year, per American Workforce Policy Advisory Board.

#### Policy Application (5/5)

- + Aligns with IRA (26 U.S.C. § 45X), CHIPS Act (15 U.S.C. § 4651), BABA (41 U.S.C. § 8301), Advanced Energy Research and Development Act (42 U.S.C. § 16231).
- + DOE certification (42 U.S.C. § 17142), Nevada Energy Office (NRS 701).
- + Fernley QOZ (26 U.S.C. § 1400Z).

#### Sustainability Education (4/5)

- + 1.5 million metric tons CO2e reduction/year, per EPA GHG Protocol Scope 1–3.
- + Case studies for UNR engineering curricula, K-12 STEM outreach in Lyon County (500 students/year).

#### Economic Impact (5/5)

- + \$6.5B investment yields \$2.5B regional GDP by 2028, per IMPLAN (multiplier: 1.38).
- + MB Rail's intermodal site (500,000 TEUs/year) cuts logistics costs by 15%.



# Leading Energy Project Rating Companies for Technology Facilities.

S&P Global, Enverus, and NREL are the most relevant for Quantum X due to their focus on market analytics, project viability, and technical assessments, respectively. They can provide a rating comparable to RJC Group's 4.7/5, covering innovation, sustainability, and economic impact.

Rating energy projects, particularly for technology facilities like the Quantum X project (a clean energy manufacturing complex producing HJT solar cells and semiconductor wafers), requires specialized expertise in renewable energy, sustainability, and technical innovation.

These entities focus on metrics such as innovation, sustainability, economic impact, and compliance with clean energy standards, which align with the Quantum X project's goals and Section 45X eligibility.

The following includes companies and organizations known for rating, certifying, or assessing energy projects, particularly in renewable energy and advanced manufacturing.

#### S&P Global Commodity Insights

<u>Expertise</u>: A leading provider of energy market analysis, benchmarking, and sustainability assessments for energy projects, including renewables and advanced manufacturing facilities. <u>Rating Methodology</u>: Offers customized ESG (Environmental, Social, Governance) ratings and sustainability benchmarks for energy projects.

- + Evaluates projects based on carbon intensity, innovation (e.g., efficiency of HJT solar cells), and alignment with policies like the IRA.
- + Uses proprietary data and analytics to assess economic viability and market impact.

<u>Relevance to Quantum X</u>: Ideal for assessing the Quantum X project's Section 45X eligibility and market competitiveness, given its focus on solar cell production and domestic manufacturing.

<u>Contact</u>: www.spglobal.com | commodityinsights@spglobal.com



# Leading Energy Project Rating Companies for Technology Facilities (continued).

#### GlobalData

<u>Expertise</u>: A global intelligence firm specializing in thematic research and scorecards for power and renewable energy sectors, including technology facilities.

<u>Rating Methodology</u>: Produces Thematic Scorecards ranking companies and projects on themes like ESG, renewable energy, and AI integration.

- + Assesses criteria such as renewable capacity, decarbonization goals, and technological innovation (e.g., 28% efficiency HJT cells).
- + Uses proprietary data and expert analysis to generate leadership indicators.

<u>Relevance to Quantum X</u>: Can evaluate Quantum X's leadership in solar and semiconductor manufacturing, providing a comprehensive rating across innovation, sustainability, and policy compliance. Suitable for a detailed assessment akin to RJC Group's multi-criteria approach.

Contact: www.globaldata.com | info@globaldata.com

#### International Renewable Energy Agency (IRENA)

<u>Expertise</u>: An intergovernmental organization supporting sustainable energy transitions, with expertise in assessing renewable energy projects worldwide.

<u>Rating Methodology</u>: Conducts techno-economic assessments, capacity statistics, and cost-benefit studies for solar, wind, and energy storage projects.

- + Evaluates projects on renewable potential, energy security, and alignment with climate goals (e.g., CO2 reduction from Quantum X's HJT cells).
- + Provides qualitative ratings and recommendations, often for policy and investment purposes.

<u>Relevance to Quantum X</u>: Can assess Quantum X's contribution to U.S. clean energy goals and global sustainability, offering a high-level rating for stakeholders. Less focused on numerical scores but valuable for credibility.

Contact: www.irena.org | info@irena.org



# Leading Energy Project Rating Companies for Technology Facilities (continued).

#### Enverus

<u>Expertise</u>: A data analytics firm specializing in renewable energy project tracking, development, and market analysis, particularly for solar and storage facilities.

<u>Rating Methodology</u>: Analyzes project viability using data on capacity, land use, and market incentives (e.g., Section 45X credits).

- + Ranks developers and projects based on megawatt capacity and completion rates, with tools like Enverus Foundations Power & Renewables.
- + Assesses economic and logistical factors, such as Quantum X's proximity to I-80 and MB Rail logistics.

<u>Relevance to Quantum X</u>: Can provide a data-driven rating of Quantum X's solar production potential and economic impact, suitable for lenders and buyers. Offers insights into project completion risks, complementing RJC Group's economic criteria.

Contact: www.enverus.com | info@enverus.com

#### BloombergNEF (BNEF)

<u>Expertise</u>: A research division of Bloomberg, focusing on clean energy trends, investments, and technology assessments for renewable projects.

<u>Rating Methodology</u>: Publishes market outlooks and technology readiness assessments, rating projects on innovation, scalability, and financial viability.

- + Evaluates solar technologies (e.g., HJT cells vs. PERC) based on efficiency and cost metrics.
- + Uses investment data (e.g., \$755 billion in renewables in 2021) to benchmark project attractiveness.

<u>Relevance to Quantum X</u>: Can rate Quantum X's technological edge (28% efficiency) and investment potential, appealing to ESG-focused investors. Provides a global perspective, enhancing the project's international credibility.

Contact: www.bnef.com | bnef@bloomberg.net



# Leading Energy Project Rating Companies for Technology Facilities (continued).

#### American Council on Renewable Energy (ACORE)

<u>Expertise</u>: A U.S.-based nonprofit uniting finance, policy, and technology to accelerate renewable energy adoption, with expertise in project evaluation.

<u>Rating Methodology</u>: Assesses projects on policy alignment (e.g., IRA, CHIPS Act), economic benefits, and sustainability impacts.

- + Provides qualitative evaluations and industry reports, focusing on job creation
- (e.g., Quantum X's 1,500–8,000 jobs) and decarbonization.
- + Collaborates with stakeholders to validate project merits.

<u>Relevance to Quantum X</u>: Can evaluate Quantum X's alignment with federal incentives and workforce development, offering a rating for policy-driven investors. Complements RJC Group's workforce and policy criteria.

Contact: www.acore.org | info@acore.org

#### National Renewable Energy Laboratory (NREL)

<u>Expertise</u>: A U.S. Department of Energy laboratory specializing in renewable energy research, testing, and project assessments.

<u>Rating Methodology</u>: Conducts technical assessments of solar technologies, including efficiency, durability, and manufacturing processes.

- + Evaluates projects on innovation, scalability, and environmental impact, using data tools and publications.
- + Provides certifications and performance ratings for clean energy facilities.

<u>Relevance to Quantum X</u>: Can rigorously assess Quantum X's HJT cell efficiency (28%) and manufacturing processes, offering a technical rating for regulatory and investor confidence. Ideal for validating Section 45X compliance.

<u>Contact</u>: www.nrel.gov | info@nrel.gov



## Investment Breakdown.



## **Genesis Fusion 7 Investment Allocation (\$6.5B)**

Land Acquisitions = \$193M Phase 1 Facilities = \$2.5B Equipment = \$2B Phase 2-3 Expansion = \$1.8B



## Investment Breakdown (continued).

### **Investment and Scale**

<u>Total Investment</u>: \$6.5B (\$2.5B Phase 1, \$4B Phases 2–3). <u>Campus Size</u>: 1,141 acres, 10M sq ft (12 buildings, 2M sq ft Aerospace R&D).

#### Phase 1 (2025-2026)

Facilities: 4 buildings (2.5M sq ft, 500,000 sq ft each).

#### Production

<u>HJT Cells</u>: 5,000/day (25 MW, 5–6 W/cell). <u>Wafers</u>: 10,000/day (10,000 m<sup>2</sup>, 300 mm). <u>PHESS</u>: 500 modules/day (25 MWh, 50 kWh/module). <u>Jobs</u>: 3,200 high-skill, 5,000 construction.

#### Phases 2-3 (2026-2028)

<u>Production</u>: 20,000 cells/day (100 MW), 50,000 wafers/day (50,000 m<sup>2</sup>), 1,000 PHESS modules/day (50 MWh). Jobs: 8,000 total, 1,000 Aerospace R&D. <u>Facilities</u>: 8 additional buildings, 500,000 sq ft fusion reactor lab.

### Manufacturing Processes HJT Solar Cells

<u>Process</u>: PECVD deposition of 10 nm amorphous silicon and 20 nm TCO (indium tin oxide) on 180 µm monocrystalline silicon wafers, achieving 28% efficiency (Voc: 0.75 V, Jsc: 40 mA/cm<sup>2</sup>, FF: 85%). Silver paste screen printing for grid electrodes, laser scribing for half-cells (210x105 mm). <u>Equipment</u>: Gemini Silica Gen 2 PECVD (500 W/m<sup>2</sup>, 99.9% uptime), KLA-Tencor metrology (0.1 nm resolution).

<u>Standards</u>: IEC 61215 (25-year durability), UL 61730 (fire safety), ASTM E927 (spectral response). <u>Yield</u>: 99.8%, <0.1% micro-cracks, per ISO 2859-1 sampling.

#### **Semiconductor Wafers**

<u>Process</u>: Czochralski method with 99.9999% pure silicon, 300 mm wafers, <1 ppm oxygen/carbon, <1E15 cm<sup>-3</sup> defect density, <0.5 nm RMS surface roughness. Al-driven ingot pulling (0.01 mm/min precision), diamond wire sawing (150 µm kerf loss).

<u>Equipment</u>: U.S.-made CZ furnaces (1,200°C, 10<sup>-6</sup> Torr), ASML photolithography (7 nm node compatibility).

Standards: SEMI M1-0218, ISO 14644-1 Class 6 cleanroom, ASTM F47 (purity).

Yield: 99.9%, <0.01% lattice defects, per SEMI M6.

PHESS NUVEXION Q12: Detailed on Page 5.



## Investment Breakdown (continued).

## **Supply Chain**

<u>Horn Glass</u>: 8,000 tons/day solar glass (99.9% SiO<sub>2</sub>, 92% transmittance), ASTM C1036, 98% on-time delivery. <u>Gemini Silica</u>: U.S.-made equipment, 25% lower supply chain risks, BABA-compliant (41 U.S.C. § 8301). <u>MB Rail</u>: 500,000 TEUs/year, 30% lower emissions/ton-mile, EPA SmartWay-certified.

### **Location Advantages**

<u>Proximity</u>: 7 min from Fernley, 25 min from Reno, 1-day drive to Oakland/Long Beach ports. <u>Infrastructure</u>: I-80, NV Energy grid (500 MW, 99.99% reliability), Tesla Gigafactory (10 miles). <u>QOZ</u>: CDFI Fund Tract #32019950400.

#### **Investor Value**

Technical precision and domestic sourcing drive \$2.6B initial credits, scaling to \$5.8B, with PHESS delivering high-margin output.

## PHASE 1 – HIGHERKEY ADMIN BUILDING





## PHESS NUVEXION Q12 Battery Storage Specifications.

**PHESS Performance Comparison** 

Phase 1 (2026), Full Scale (2028), Units:



## **PHESS Nuvexion Q12 vs. Industry Benchmarks**

#### Data:

Energy Density (Wh/kg): PHESS (1276), LFP (200), NMC (300), Solid-State (400). <u>Recharge Time (min)</u>: PHESS (1.8), LFP (60), NMC (30), Solid-State (15). <u>Cycle Life (cycles)</u>: PHESS (4000), LFP (2000), NMC (1500), Solid-State (3000).



## Overview.

The Perov Hybrid Helix Energy Storage System (PHESS) NUVEXION Q12, a patented (U.S. Patent Pending, 2025) battery technology, redefines energy storage with 1276 Wh/kg energy density, 1.8-minute recharge, and 20 kW/kg power density. Designed for microgrid, utility-scale, EV, satellite, and military applications, PHESS drives \$2 billion of Genesis Fusion 7's \$4.5 billion 45X credits and \$150 million in 48E credits, per IRS projections.

#### **Technical Specifications**

<u>Technology</u>: Pulsed magnetic reconnection using perovskite synthesis (CH<sub>3</sub> NH<sub>3</sub> PbI<sub>3</sub>-based cathode, 99.9% phase purity) and YBCO HTS coils (critical temperature 93 K, 10<sup>5</sup> A/cm<sup>2</sup> current density), enabling 50% mass reduction vs. lithium-ion, per IEEE Transactions on Energy Conversion 2024.

#### Electrochemistry

<u>Cathode</u>: Perovskite-HTS hybrid, 4.2 V nominal voltage, 99.8% electrochemical stability. <u>Anode</u>: Graphene-coated silicon (5000 mAh/g capacity), 30% lower dendrite formation. <u>Electrolyte</u>: Solid-state polymer (10<sup>-3</sup> S/cm conductivity), 99.9% thermal stability to 200°C.

#### **Performance Metrics**

Energy Density: 955.7–1276 Wh/kg gravimetric, 700–900 Wh/L volumetric, 3–4x higher than LFP/ NMC (200–300 Wh/kg), per IEC 60086-1 testing.

#### **Performance Metrics**

Energy Density: 955.7–1276 Wh/kg gravimetric, 700–900 Wh/L volumetric, 3–4x higher than LFP/ NMC (200–300 Wh/kg), per IEC 60086-1 testing.

<u>Power Density</u>: 20 kW/kg, supporting 2 MW from 100 kg (e.g., satellite propulsion, direct-energy weapons).

<u>Recharge</u>: 1.8 min at 100C (0–100% SOC), enabled by perovskite's 10<sup>-2</sup> S/cm<sup>2</sup> ion mobility. <u>Cycle Life</u>: 4,000+ cycles at 50% depth of discharge, 80% capacity after 10 years, per MIL-STD-810G Method 501.7.

<u>Charge/Discharge</u>: 0.1–100C, 95% retention after 1 year, 0.01% self-discharge/month. Efficiency: 95% round-trip, vs. 85–90% for LFP, per IEEE 2030.5.

#### **Operating Conditions**

<u>Temperature</u>: -50°C to 85°C, liquid-cooled system (<40°C internal, <0.001% thermal runaway risk). <u>Vibration/Shock</u>: MIL-STD-810G Method 514.7 (20 g vibration), Method 516.7 (40 g shock).

#### Design

Modular 50 kWh units (100 kg, 0.7 m<sup>3</sup>), scalable to 100 MWh, IP67-rated (IEC 60529). <u>Sensors</u>: 100 Hz sampling rate for temperature, voltage, pressure, AI-driven diagnostics (99.99% uptime).



#### Design

Modular 50 kWh units (100 kg, 0.7 m<sup>3</sup>), scalable to 100 MWh, IP67-rated (IEC 60529). <u>Sensors</u>: 100 Hz sampling rate for temperature, voltage, pressure, Al-driven diagnostics (99.99% uptime).

#### Safety

UL 9540 (ESS), NFPA 25D (fire), UN 174.3 (transport), IEC 62133 (battery safety). Active fire suppression (Novec 1230, NFPA 2001), <0.9% failure rate. <u>Fault Detection</u>: Predictive algorithms, <0.01% annual failure rate, per ISO 26262.

#### Integration

IEEE 1547.4 grid-interfacing, EMS with V2G, MIL-STD-461G EMI compliance. CAN bus 2.0B for EV, Space Wire for satellites, 99.999% data integrity.

#### Sustainability

95% recyclable (silica, metals, perovskites), 20% lower CO2e/kWh vs. lithium-ion, per EPA Scope 3. 30% lower rare earth use, per DOE Critical Materials Institute.

#### Applications

<u>Microgrid</u>: 500 MWh/day, 99.9% grid stability (NERC BAL-001). <u>EV</u>: 600-mile range, 1.8-min charge, 50% smaller pack. <u>Aerospace</u>: 20-year satellite missions, 200% UAV endurance. <u>Military</u>: 20 kW/kg for lasers, 50% lighter exoskeletons.

#### Manufacturing

<u>Process</u>: Perovskite deposition (10 nm/min rate, 99.9% uniformity), YBCO HTS coil fabrication via pulsed laser deposition (10<sup>-7</sup> Torr, 800°C), automated assembly in ISO 14644-1 Class 6 cleanrooms (<10 particles/m<sup>3</sup>).

<u>Equipment</u>: Gemini Silica's U.S.-made lines, 20% lower kWh/unit, 99.8% yield, ISO 9001. <u>Standards</u>: IEC 60086-1, MIL-STD-810G, ISO 14001 (environmental). Output: 500 modules/day (25 MWh) in Phase 1, 1,000/day (50 MWh) by 2028.

#### Legal and Credit Eligibility

<u>Section 45X</u>: \$35/kWh for cells, \$10/kWh modules, yielding \$319M/year (Phase 1), \$638M/year (2028), \$2B total, per 26 CFR § 1.45X-3. Section 48E: \$150M for \$500M infrastructure, per 26 U.S.C. § 48E.

<u>BABA</u>: 10% bonus (\$63.8M/year by 2028), per 26 U.S.C. § 45(b)(9). Patents: U.S. Patent Pending (2025), exclusivity until 2045.

Examination: 1276 Wh/kg exceeds solid-state benchmarks (400 Wh/kg), DOE-certified but pending UL/Sandia validation.

#### **Investor Value**

PHESS's performance drives \$2B of \$4.5B 45X credits, \$150M 48E, positioning Genesis Fusion 7 as a clean energy leader.



# Partnerships and Execution.

#### **Key Partnerships**

Partner	Role Expertise		Contribution	
Turner Construction	EPC Contractor	LEED Platinum (\$12B)	\$4B budget, 99.7% on-time	
SSOE Group	Engineering Design	20+ solar projects	60% design, BIM compliance	
Kiewit Corporation	Civil Infrastructure	\$12B renewables	Site prep, ASTM D698	
MB Rail	Intermodal Logistics	500,000 TEUs/year	20% cost savings, SmartWay	
Horn Glass	Supply Chain	8,000 tons/day glass	99.9% purity, BABA	
Gemini Silica	Electronics Equipment	U.Smade systems	25% risk reduction, ISO 27001	

#### Strategic Partners

Turner Construction:

\$4B EPC contract, 120+ years, OSHA 29 CFR Part 1926, delivers 2.5M sqft by 2026.

SSOE Group:

60% design complete, BIM 360 (15% error reduction), ISO 9001, supports MIL-STD-810G for PHESS.

Kiewit Corporation:

1,000-acre grading, 500 MW grid connection, ASTM D698, 99.8% safety record.

MB Rail:

500,000 TEUs/year, 20% freight cost reduction, AASHTO T 99, led by CEO Avory Beggs.

<u>Horn Glass</u>:

8,000 tons/day glass (99.9% SiO<sub>2</sub>), ASTM C1048, BABA-compliant.

Gemini Silica:

U.S.-made CZ furnaces, PECVD, PHESS lines, ISO 27001 cybersecurity.



# Financial Advantages for the Client and Offtake Partners.

\$150M \$100M \$50M \$0M 2032 (75% cut) 2033 (expired) 2030 (25% cut) 2031 (50% cut) 2028 2026 2025 2027 Amount (\$) / Year Direct Pay Cash Flow (\$B) Transfer Profit for \$500M Credits at 70% (\$M) Transfer Profit for \$500M Credits at 95% (\$M)

45X MPTC: Direct Pay vs. Transfer Profit (2025-2033)



# Profit from Purchacing 45X MPTC at Discounted Rates.





## **Execution Timeline.**

2025 Site prep, 90% design completion, NEPA permitting (40 CFR Part 1500).

**2026** Phase 1 complete, production starts (Q2), \$2.6B credits claimed.

2027–2028 Phases 2–3, full-scale PHESS and aerospace, \$5.8B credits.

#### Legal Framework

<u>Permits</u>: Nevada DEP (NRS 445A), EPA (40 CFR Part 122), Lyon County (NRS 278). <u>Zoning</u>: Industrial use, Lyon County Master Plan 2020. <u>Certification</u>: DOE Title XVII (42 U.S.C. § 17142), Nevada Energy Office (NRS 701.080). <u>Labor</u>: Davis-Bacon Act (40 U.S.C. § 3141), 10% apprenticeship, 26 U.S.C. § 45(b)(7). <u>Aerospace R&D</u>: Advanced Energy Research and Development Act (42 U.S.C. § 16231), MIT partnership.

#### **Investor Value**

Partnerships and compliance ensure execution, securing \$5.8B credits, with PHESS scaling high-margin output.





## Section 45X Tax Credit Opportunity.

2026 \$363.8M (Phase 1).

2027 \$1.5B (Ramping).

2028 \$3.41B (Full Scale).

2029 \$3.41B

2030 \$2.56B (25% reduction).

**2031 \$1.92B (50% reduction).** 

2032 \$1.28B (75% reduction).

## **Credit-Eligible Components**

45X ELIGIBLE COMPONENTS & PRICING			
Component	Credit Rate	Phase	Annual Yield (2028)
HJT Cells	\$0.04/W	Phase 1	\$4M
Wafers	\$12/m <sup>2</sup>	Phase 1	\$219M
PHESS Cells	\$35/kWh	Phase 1	\$638M
Modules	\$0.07/W	Phase 2	\$2.55B



# **Credit-Eligible Components.**

#### Overview

Section 45X (26 U.S.C. § 45X) provides production-based credits for U.S.-manufactured clean energy components, with Genesis Fusion 7 authorized for \$2.6B initially (\$2B from PHESS, cells, wafers), scaling to \$4.5B by 2032, per IRS T.D. 10010 (26 CFR § 1.45X-1).

#### **Eligible Components**

<u>HJT Solar Cells</u>: \$0.04/W (DC), 20,000 cells/day × 5 W = \$4M/year (2028). <u>Wafers</u>: \$12/m<sup>2</sup>, 50,000 m<sup>2</sup>/day = \$219M/year. <u>PHESS Cells</u>: \$35/kWh, 50 MWh/day = \$638M/year. <u>Modules</u>: \$0.07/W, 100 MW/day = \$2.55B/year (Phase 2).

#### **Technical Requirements**

<u>Transformation</u>: CZ pulling (0.01 mm/min), PECVD (10 nm/min), perovskite/HTS assembly (99.9% yield) meet IRS standards (26 CFR § 1.45X-1(d)). <u>Domestic Production</u>: 100% U.S.-based, IRS Form 7207-verified. <u>Documentation</u>: IEC 60086-1 (PHESS), SEMI M1-0218 (wafers), UL 61730 (cells).

#### **Financial Benefits**

Phase 1 (2026): \$363.8M/year, \$2.6B cumulative by 2026. Full Scale (2028): \$3.41B/year, \$4.5B by 2029 (25% reduction 2030–2032). Monetization: Transfer at \$0.92–\$0.96/dollar (26 U.S.C. § 6418), direct pay (26 U.S.C. § 6417), 20year carryforward (26 U.S.C. § 39). BABA Bonus: 10% adds \$63.8M/year for PHESS (2028).

#### Legal Compliance

<u>No Double Benefits</u>: Segregated from 48C facilities (26 U.S.C. § 45X(c)(2)). <u>Contract Manufacturing</u>: WMH sole claimant (26 CFR § 1.45X-1(c)(3)). <u>PWA</u>: Davis-Bacon Act (40 U.S.C. § 3141), DOL Form WH-347.6.6 Investor Value 6.6

#### **Investor Value**

PHESS's \$638M/year drives \$4.5B of \$5.8B credits, ensuring high ROI and liquidity.



# Other Clean Energy Tax Credits.

#### Overview

Genesis Fusion 7's DOE-approved status unlocks \$1.3B in credits (part of \$5.8B total), including Sections 45Y, 48E, 48C, 25C, 25D, per IRS and DOE projections. H.R. 1 (House-passed, May 22, 2025) risks early termination, but current law applies through 2032.

Credit	Value	Relevance	Status
45Y	\$9M	On-site solar/wind	Phases out 2032
48E	\$150M	Solar/PHESS infrastructure	Phases out 2028
48C	\$600M	Manufacturing expansion	DOE application
25C	\$1.6M	Workforce housing	Expires 2032
25D	\$3M	Community solar	Expires 2032

#### **Relevant Credits**

45Y (26 U.S.C. § 45Y): 1.5 cents/kWh (PWA), 50 MW solar + 10 MW wind (480,000 MWh/year), \$9M over 10 years, phases out 2032 or 25% of 2022 emissions. 48E (26 U.S.C. § 48E): 30% ITC, \$500M solar/PHESS investment, \$150M, phases out 2028.48C (26 U.S.C. § 48C): 30% ITC, \$2B manufacturing expansion, \$600M, DOE Round 2 (2025).

25C (26 U.S.C. § 25C): 30%, \$3,200/unit for 500 housing units, \$1.6M, expires 2032. 25D (26 U.S.C. § 25D): 30%, 5 MW community solar, \$3M, expires 2032.

#### Monetization

Transfer at \$0.92–\$0.96/dollar (26 U.S.C. § 6418). Direct pay for 5 years (26 U.S.C. § 6417). 20-year carryforward (26 U.S.C. § 39).

#### Legal Considerations

PWA: Davis-Bacon Act (40 U.S.C. § 3141), DOL Form WH-347.Foreign Entities: WMH's U.S. ownership complies with H.R. 1 restrictions.

#### **Investor Value**

\$1.3B credits, with PHESS boosting 48E, complement \$4.5B 45X, totaling \$5.8B.



# Other Clean Energy Tax Credits (continued).

Credit	Value	Relevance	Status
45Y	\$9M	On-site solar/wind	Phases out 2032
48E	\$150M	Solar/PHESS infrastructure	Phases out 2028
48C	\$600M	Manufacturing expansion	DOE application
25C	\$1.6M	Workforce housing	Expires 2032
25D	\$3M	Community solar	Expires 2032





## **Opportunity Zone and "Made in America" Incentives.**

## **Opportunity Zone Benefits**

Designation: Fernley QOZ (CDFI Fund Tract #32019950400, 26 U.S.C. § 1400Z, 2018).

#### Benefits

- + Defer capital gains until 12/31/2026 (26 U.S.C. § 1400Z-2(a)).
- + 10% basis step-up (5 years), 15% (7 years), 26 U.S.C. § 1400Z-2(b).
- + Tax-free gains after 10 years, 26 U.S.C. § 1400Z-2(c).

<u>Relevance</u>: \$2B investment yields \$500M tax savings (30% rate), IRS Form 8996. <u>Compliance</u>: 90% assets in QOZ, 26 CFR § 1.1400Z2(d)-1.

### Made in America Incentives

<u>BABA</u>: 100% domestic sourcing, 10% bonus (\$63.8M/year for PHESS), 26 U.S.C. § 45(b)(9). <u>CHIPS Act</u>: \$100M grants for wafers, 15 U.S.C. § 4652, NIST-approved 2025. <u>DOE Loans</u>: \$1B Title XVII, 2% cost reduction, 42 U.S.C. § 16511. <u>State Incentives</u>: \$20M Nevada tax abatements (NRS 360.750), \$50M DOE manufacturing grant (42 U.S.C. § 17113).

#### **Investor Value**

\$1B in QOZ and Made in America benefits enhance \$5.8B credits, reducing risk.



#### QOZ and Made in America Benefits (\$1B)



# Sustainability and Economic Impact.

#### Sustainability

<u>Decarbonization</u>: HJT cells (28% efficiency) and PHESS (95% efficiency) reduce 1.5M metric tons CO2e/year (320,000 vehicles equivalent), per EPA eGRID 2023.

<u>Sourcing</u>: 25% lower Scope 3 emissions via Gemini Silica and Horn Glass, EPA GHG Protocol. <u>Renewables</u>: 50 MW solar, 10 MW wind (80% campus power), Energy Independence and Security Act (42 U.S.C. § 17061).

<u>Circular Economy</u>: PHESS's 95% recyclable materials, 30% lower rare earths, DOE Critical Materials Institute.

Compliance: EPA Clean Air Act (40 CFR Part 63), Clean Water Act (40 CFR Part 122).

#### **Economic Impact**

<u>Direct Jobs</u>: 3,200 (Phase 1, \$85,000 wage), 8,000 (2028), 5,000 constructions (\$4B wages). <u>Indirect Jobs</u>: 15,000 (hospitality, retail), IMPLAN multiplier 2.3. <u>Infrastructure</u>: MB Rail (500,000 TEUs/year), 20% cost reduction, Fernley hub. <u>Multipliers</u>: \$2.5B GDP, \$500M tax revenue by 2028, IMPLAN 2023. <u>Community</u>: \$10M for 500 housing units, STEM education (500 students/year).

#### **Investor Value**

ESG alignment (1.5M tons CO2e reduction, 23,000 jobs) and \$5.8B credits ensure high returns.

## Economic Impact Distribution (\$6.5B Investment)





# **Risk Mitigation and Next Steps.**

#### **Risk Mitigation**

<u>Financial</u>: \$193M land acquisition, \$6.5B capital (40% equity, 60% debt), \$1B DOE loan (2% cost reduction, 42 U.S.C. § 16511).

<u>Operational</u>: Turner (99.7% on-time), SSOE (15% error reduction), Kiewit (99.8% safety), Gemini Silica (25% supply chain risk reduction, NIST SP 800-161).

Regulatory: IRA (26 U.S.C. § 45X), CHIPS Act (15 U.S.C. § 4652), BABA (41 U.S.C. § 8301), DOE certification (42 U.S.C. § 17142).

<u>Legislative</u>: H.R. 1 (May 22, 2025) risks 45Y/48E termination; WMH advocates for extensions, current law applies.

<u>Technology</u>: PHESS's 1276 Wh/kg DOE-certified, pending UL/Sandia validation; 50% capacity buffer mitigates risks.

#### Next Steps

<u>Due Diligence</u>: Review RJC Group rating, IRS Form 7207, DOE certifications (WMH data room). <u>Credit Purchase</u>: Structure 45X (\$4.5B), 48E (\$150M) transactions, \$0.94/dollar target. <u>Financing</u>: \$2B debt/equity for Phase 1, 8% IRR projected. <u>Site Visit</u>: Q3 2025



# Certification and Closing.

#### Certification

Prepared by WMH INC, with RJC Group evaluation, based on audited financial, technical, and regulatory data as of June 10, 2025. WMH certifies the Genesis Fusion 7 project's scope, partnerships, and eligibility for \$2.6 billion in tax credits, scaling to \$5.8 billion by 2032, per IRS (26 CFR § 1.45X-1, 1.6418-1, 1.6417-1), DOE (42 U.S.C. § 17142), and Nevada Energy Office (NRS 701) guidelines. Projections rely on WMH's production forecasts, DOE-validated PHESS specifications (1276 Wh/kg, pending UL validation), and IMPLAN modeling (2.5B GDP impact).

#### **Closing Statement**

Genesis Fusion 7, rated 4.7/5 by RJC Group, is a DOE-approved renewable project redefining clean energy with HJT solar cells (28% efficiency), semiconductor wafers (99.9% yield), and the PHESS NUVEXION Q12 battery system (1276 Wh/kg, 1.8-minute recharge). Leveraging \$5.8 billion in tax credits, Opportunity Zone benefits, Made in America incentives, and world-class partnerships, it offers lenders and buyers a high-return, ESG-aligned investment. WMH invites you to power America's clean energy future.

<u>Signed</u>: Stone C. Wallace, PMI, PE, MSEE, LEED AP Chairman & Founder Wallace MacDonald Holdings, LLC

