XOS

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POWERING THE VENUES

A Zero-Emission Venue Power Solution for the LA 2028 Games

PREPARED BY

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DISTRIBUTED TO

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Executive Summary

The 2028 Olympic and Paralympic Games arrive in Los Angeles under two commitments that shape every decision about how the Games will be powered: 100% renewable electricity across every venue and no new permanent infrastructure. Meeting both at once will be a challenge. More than 40 venues across nine geographic zones, many of them temporary, will require reliable high-capacity power for lighting, broadcast, communications, security, catering, and competition operations. Many temporary venues are expected to rely on temporary power infrastructure, while LA28's sustainability strategy aims to maximize the use of clean electricity and reduce reliance on diesel generators

The two proven ways of powering temporary venues each fail one of those commitments: diesel generators, the format used at most large events to date, cannot meet the zero-emission standard, while permanent grid connections, the approach that Paris 2024 used to power its Games cleanly, leave behind exactly the kind of fixed infrastructure LA28 has committed to not building. What the Games need is a third option: one that meets both commitments at once.

The Xos AC Power Hub, paired with the Xos Solar System portable solar system, was designed for precisely this kind of constraint. The AC Power Hub is a mobile, battery-buffered power system that draws on a 210, 420, or 630 kWh LFP battery and delivers up to 150 kW of AC power across two independent channels, accepting input from multiple power sources at the same time, even on-site solar energy, while the Xos Solar System generates 90 kW of clean solar power that feeds the Hub with no utility connection at all. Because the system is mobile and modular, it can be sized to a single venue or linked across many, scaling to 6.3 MWh without any of the permitting, excavation, or construction that fixed infrastructure requires, and when competition ends, it leaves nothing permanent behind.

> **LA28 has described its Games as the largest temporary power overlay in Olympic history. The AC Power Hub is built for that scale, and for the two commitments that define it.**

Introduction

Every modern Olympic Games has faced the same logistical problem: how do you deliver stadium-grade power to venues that the grid was not built to reach? For decades the answer went unquestioned, because diesel generators were simply what large temporary events ran on, from festivals and concerts to construction sites and, at the largest scale of all, the Olympic Games. The Beijing 2008 International Broadcast Centre alone required 46 generators and 80,000 meters of cable to supply 48.2 MVA of power,[5] and the venues of London 2012 collectively burned through 4 million liters of diesel fuel.[6] What was once the default power solution has become, for a Games built on a zero-emission promise, the one option that is no longer available.

Paris 2024 was the first Olympics to prove there was another way. By connecting every venue to France's renewable-powered national grid, the organizers eliminated diesel generators entirely and avoided the equivalent of 13,000 tonnes of carbon emissions.[7] It was a genuine breakthrough, but it was also a local one, made possible by conditions specific to Paris: venues clustered within a 10-kilometer radius, a national grid already 95% emissions-free, and a city policy that welcomed permanent electrical connections as a lasting upgrade to municipal infrastructure. Those connections were meant to stay, and they remain in service today.

Los Angeles begins from an entirely different starting point, because none of those conditions hold. Its venues stretch across nine zones in one of the most spread-out metropolitan areas in the world, its grid runs at 64% clean energy as of 2026 and will not reach 100% until 2035,[11] and its defining sustainability policy, radical reuse, commits the Games to returning every temporary venue to its original state, which rules out the permanent connections that made the Paris model work. Paris proved that a zero-emission Olympics is achievable; it also proved that the method behind it is inseparable from the city that built it, and that Los Angeles will have to reach the same goal by different means.

This document lays out the case for a different approach: mobile, modular power generation and storage that deploys at any venue in any zone, scales as demand shifts, stands up in days rather than the months that permanent infrastructure demands, and, rather than being dismantled when the Games close, redeploys into the region as a lasting clean-energy asset for the utilities, cities, and operators that will still need power long after the closing ceremony. It is addressed to the organizations that will make this commitment real, and it is specific about what each of them is being asked to do.

Section 1: The Venue Energy Challenge

1.1 What It Takes to Power an Olympic Venue

An Olympic venue in competition is among the most energy-intensive temporary environments a city can build, because beyond the stadium itself each venue runs at once as a broadcast facility, a communications hub, a catering operation, a medical center, a security post, and a field-of-play, all drawing uninterruptible power across a competition day that can stretch 12 to 16 hours.

Data from professional sports venues gives a reliable sense of that baseline in both daily energy use and instantaneous peak demand:

- A 70,000-seat stadium consumes 10,000 to 20,000 kWh on a single event day for lighting, HVAC, concessions, and broadcast.[8]
- The Intuit Dome in Inglewood, the Olympic and Paralympic basketball venue, peaks at 6.5 MW on game days.[9]
- A major NFL or NBA arena runs at a 15-minute peak of 2.5 to 9 MW depending on climate and capacity.[9]

Olympic competition then layers additional demand on top of that baseline, with broadcast and media the single largest addition, as NBC Sports and Olympic Broadcast Services transmit live to a global audience from all nine zones and hold redundant power as a hard requirement at every venue.

10-20 MW
Peak power demand per major venue during active Olympic competition

48.2 MVA
Temporary power for the Beijing 2008 International Broadcast Centre alone

1.2 The LA28 Venue Network

LA28 will run across more than 40 venues in nine zones, with no two major venues sharing a utility connection and no permanent infrastructure built to link them. The table below brings that dispersed network into a single view, modeling the estimated daily energy demand and peak power draw for each primary competition venue using published venue specifications and conservative assumptions for Olympic-scale events, so that the scale of the overall power requirement can be read at a glance.

Venue	Capacity	Sports / Function	Daily kWh (est.)	Peak MW	Key Power Notes
Los Angeles Memorial Coliseum	80,000	Athletics, Opening/Closing Ceremony	15,000 kWh	6-9 MW	Broadcast, field lighting, ceremonies
SoFi Stadium / Inglewood	70,000	Gymnastics, American Football	14,000 kWh	6-8 MW	Full broadcast, LED roof, HVAC

Venue	Capacity	Sports / Function	Daily kWh (est.)	Peak MW	Key Power Notes
Intuit Dome	18,000	Basketball (Olympic, Paralympic)	8,000 kWh	6.5 MW	Published peak demand on game day [9]
Crypto.com Arena	20,000	Boxing, Weightlifting	7,000 kWh	4-6 MW	Full broadcast, air conditioning
Rose Bowl	92,000	Soccer	12,000 kWh	5-7 MW	Field lighting, broadcast, concessions
Sepulveda Basin Complex	N/A	BMX, Skateboarding, 3x3 Basketball	2,000 kWh	0.6-0.8 MW	Temporary venue, no grid connection
Long Beach Venue	N/A	Rowing, Canoe Sprint, Sailing	1,400 kWh	0.3-0.4 MW	Remote coastal location, no grid
Malibu / Coastal Zone	N/A	Surfing	600 kWh	0.1-0.15 MW	Remote, off-grid requirement
Media and Broadcast Hub	N/A	NBC / IBC Operations	20,000 kWh	8-12 MW	24-hour operations, redundant power
Athlete Village (UCLA)	N/A	Athlete accommodation and services	10,000 kWh	4-6 MW	Committed to 100% clean electricity [12]
Total across all venues (est.)			117,000 + kWh	58-76 MW	Peak simultaneous demand, estimated across the full 40+ venue network; rows above show primary venues only

Several of these venues, particularly the temporary sites at Sepulveda Basin, Long Beach, and Malibu, sit well away from the high-power grid infrastructure a Games venue needs. LA28 has not published its final power plan for each site, so the exact approach at any given venue remains to be determined; what the geography makes clear, however, is that a meaningful share of the network is likely to require power that does not come from a permanent grid connection.

> *LA28 has described its Games as the largest temporary power overlay in Olympic history.[3] The estimates above suggest what that means in practice: more than 117,000 kWh of venue power daily, across nine zones, delivered entirely from renewable sources without permanent grid infrastructure.*

Figures for the Intuit Dome derive from published peak demand data.[9] Estimates for all other venues are Xos projections, built by applying published benchmarks for comparable facilities, 10,000 to 20,000 kWh per event day for a 70,000-seat stadium[8] and a 15-minute peak average of 2.5 to 9 MW for major arenas,[9] to each venue's seating capacity, operating profile, and the broadcast and support load specific to Olympic competition. LA28 has not published venue-level energy requirements, so these figures are presented as a planning scenario rather than confirmed demand. The temporary off-grid venues (Sepulveda, Long Beach, and Malibu) are benchmarked instead against published temporary-event power figures, a festival main stage

drawing roughly 250 to 400 kW and a broadcast compound carrying redundant technical power, reflecting their far smaller footprint relative to permanent stadiums and arenas.

Section 2: Why Conventional Venue Power Does Not Work for LA28

Diesel generators and permanent grid connections are the two conventional answers to temporary venue power, and each one fails a different half of what LA28 has committed to. Neither failure is a matter of degree that better engineering or a bigger budget could close, and combining the two does not resolve either problem: a venue running half on diesel still emits, and a venue with a permanent connection still leaves infrastructure behind.

2.1 Diesel Generators and the Emission Standard

Diesel has powered temporary venues at large events for decades, and the record at recent Games shows the scale of that dependence: 46 generators at the Beijing 2008 International Broadcast Centre alone,[5] and 4 million liters of fuel across the venues of London 2012.[6] That fuel comes at a cost beyond carbon: diesel combustion releases particulate matter and nitrogen oxides into the air of whatever neighborhood surrounds the venue, which for a Games that has made specific commitments to the City of Los Angeles and its residents makes local air quality as pressing a concern as the emissions themselves.

The scale of the emissions makes the point plainly: a single evening of professional football in France burns roughly 4,000 liters of diesel and emits about 12 tonnes of CO2, according to Nicolas Perrin, Paris director of Enedis,[7] and extended across 40 venues running 17 competition days, diesel-powered operations would put LA28's carbon footprint in direct conflict with its own sustainability plan, which commits the Games to cutting operational and construction emissions by at least 10% against Paris 2024.[2] LA28's own plan points in the same direction: where the Games need to supplement the grid, it commits to maximizing the use of lower-carbon temporary power technologies, naming batteries and solar specifically.[2]

4M liters
Diesel burned to power venues at London 2012 (reference baseline)

12 tonnes CO2
Emissions from a single evening of professional football in France

2.2 Permanent Grid Connections and the Reuse Policy

The cleaner alternative, the one Paris built, runs into a different wall. Connecting a venue to the permanent grid is the lowest-carbon option available when the grid itself is clean, but it requires laying electrical infrastructure that outlives the event. In Paris that was a feature: the new connections were a deliberate, lasting upgrade to the city, and for the venues the grid could not reach, retractable terminals were sunk beneath the road surface for future use.[7] All of it stayed after the Games.

For LA28 that same permanence is the problem, because radical reuse commits the Games to returning every temporary venue to its original state, with at least 90% of temporary infrastructure materials reused or recycled.[2] Running a permanent electrical line into Sepulveda Basin, the Malibu surf zone, or the Long Beach coastal venue leaves two options at the end of the Games, and both break a commitment: tear the connection out, which contradicts the reuse of what was just built, or leave it in place, which contradicts the

promise of no permanent infrastructure. The Paris solution and the LA28 policy cannot both hold.

2.3 What Paris Actually Proves

It would be easy to read Paris 2024 as a solution simply waiting to be copied, but the more useful reading is a narrower one, because what Paris really proved was two things at once: that a zero-emission Games is possible, and that the method behind it was inseparable from three conditions Los Angeles does not share, namely venues within a 10-kilometer radius, a national grid already 95% emissions-free, and a policy that welcomed permanent infrastructure. Strip those conditions away and the Paris method does not hold; what survives is the goal itself, and the obligation to reach it another way.

Section 3: The Xos AC Power Hub and Xos Solar Syste Ecosystem

3.1 The AC Power Hub

The Xos AC Power Hub is a mobile, battery-buffered power system built to remove the delays and costs that conventional temporary power imposes, supplying zero-emission AC power through two independent channels of up to 150 kW each, managed intelligently and fed from any input source, and standing up within days of reaching a site with no permits, no excavation, and nothing installed permanently.

Xos AC Power Hub. Mobile, weather-resistant design with dual AC output channels and universal input compatibility. Design concept for illustrative purposes only.

Specification	Detail
Battery Capacity Options	210 kWh, 420 kWh, or 630 kWh per unit (LFP chemistry)
AC Output, 420 kWh configuration	Dual channel; up to 150 kW total, up to 120 kW per channel
AC Output, 630 kWh configuration	Dual channel; up to 300 kW total, up to 150 kW per channel
Channel Operation	Each channel operates independently or combined; bidirectional
Voltage Support	Switchable: 480Vac 3-phase, 208Vac 3-phase, 240Vac split-phase
Input Flexibility	Universal: grid, generator, V2G, AC/DC chargers at the same time
Bi-directional Operation	Receives input and provides output power at the same time
Maximum Array Capacity	Link multiple units to scale up to 6.3 MWh of storage

Specification	Detail
Deployment Time	Live within days; no permits, excavation, or permanent installation
Operating Range	-20 degrees C to +55 degrees C; weather-resistant enclosure
Controls	10-inch HMI touchscreen; remote monitoring via LTE and WiFi
Certifications	UL1973, UL9540A, UL1741; Sourcewell Contract #082625-XOS
Procurement Vehicles	GSA Schedule, OMNIA Partners, National Purchasing Partners Government, California CORE Approved Dealer
Origin	Designed in California, manufactured in Tennessee. Buy American compliant.

3.2 The Xos Solar System: On-Site Solar Generation

The Xos Solar System is a rapidly deployable solar generation system built to pair with the AC Power Hub and supply renewable energy on-site with no utility connection, producing 90 kW of continuous solar output from 152 panels at 600W each, an estimated 150,000 kWh a year at average peak sun hours, and standing up in a matter of days with no permits and no construction, feeding the Hub's battery from clean generation through the daylight hours.

Xos Solar System deployed at an open-area venue, generating 90 kW of on-site solar power feeding into the AC Power Hub battery storage. Design concept for illustrative purposes only.

Specification	Detail
Solar Output	90 kW per array; 180 kW in the 40 ft container configuration, using two 90 kW arrays connected in parallel on the DC side
Panel Configuration	152 panels at 600W each (per 90 kW array)
Annual Energy (est.)	150,000 kWh per 90 kW array, based on 5 to 6 peak sun hours per day
Hub Charge Time	2.5 hours to fully charge a 210 kWh AC Power Hub
Deployment Time	Live in a matter of days
Wind Resistance	20 m/s (approximately 45 mph)
Weather Rating	IP66 dust and water resistant
Grid Requirement	None; fully off-grid operation with the AC Power Hub

3.3 How the Ecosystem Works

The AC Power Hub and the Xos Solar System are two independent products that are stronger together, not two halves of one machine. The Hub is a complete power system on its own: it stores energy in its LFP battery and delivers up to 300 kW of AC across two channels, drawing its charge from whatever a site offers, whether an off-peak grid connection, a generator, on-site solar, or any combination at once. It requires no solar array to operate. The Xos Solar System is likewise self-contained: 90 kW of clean generation that can feed the Hub, another battery, or a load directly, with no utility tie of its own.

What they share is an interface, not a dependency. Where a venue has a usable grid connection, the Hub runs on off-peak grid power alone and the Xos Solar System is optional, added only to drive the carbon number lower. Where a venue has no grid, the Xos Solar System becomes the Hub's generation source and the two form a closed, zero-emission loop, with staged battery capacity carrying the site through the hours the sun is down. The same Hub serves both cases without modification; only the input changes. In every configuration the power delivered can be traced from source to load, rather than claimed through a renewable certificate bought elsewhere.

3.4 Venue-by-Venue Deployment Model

Because LA28's venues differ so widely in their access to the grid, their available space, and their operational profile, no single configuration applies across the network. The deployment model instead groups the venues into three archetypes, each defined by the role the AC Power Hub and the Xos Solar System play at that site. The distinction is deliberate: it reflects how the two products deliver value both in combination and independently, and it allows each venue to be equipped with only what its conditions require.

Hub-only (grid-buffered). Indoor arenas with a strong existing utility connection, such as Crypto.com Arena, require reliable storage and clean power delivery rather than on-site generation. At these sites the AC Power Hub charges from off-peak grid power and manages the venue's afternoon peak demand, without the space or the need for a solar array. These venues illustrate the value of the Hub as a standalone system. The Intuit Dome is the exception: already equipped with roughly 2 MW of rooftop solar feeding an 11 MW battery system,[23] iit needs no primary Hub, only a single unit held as broadcast and critical-load backup.

Full ecosystem (Hub and Xos Solar System). Large open-air venues that combine a grid connection with substantial daytime space and sun exposure, including the Coliseum, SoFi Stadium, the Rose Bowl, the UCLA Athlete Village, and the Media and IBC hub, benefit most from the paired system. The Xos Solar System shifts the delivered-power mix toward verifiable solar generation, while the Hub's grid connection and battery storage provide the redundancy that broadcast operations require.

Xos Solar System-led (off-grid). Remote sites without a usable grid connection, including Sepulveda Basin, Long Beach, and Malibu, rely on on-site solar as their primary energy source. In this configuration the Xos Solar System performs the generation and the AC Power Hub provides the storage and delivery that convert intermittent solar output into firm, 24-hour venue power, with a low-emission HVO generator retained only as backup.

The table below sets out the proposed configuration for each venue, grouped by archetype.

Venue / Zone	Config.	Hub Peak Power	Total Energy	Why this configuration
LA Memorial Coliseum	4 x Hub 630	**1,200 kW**	2,520 kWh	Highest-demand venue (ceremonies, athletics, broadcast). Four 300 kW units deliver the peak plus one-unit redundancy for live transmission.
SoFi Stadium Area	4 x Hub 630	**1,200 kW**	2,520 kWh	Full-stadium broadcast and HVAC load. Four 300 kW units carry the peak with a spare unit held for continuous broadcast.
Intuit Dome	1 x Hub 420 (backup)	**150 kW**	420 kWh	Already equipped with ~2 MW of rooftop solar and an 11 MW on-site battery system,[23] so no primary Hub is needed. A single unit is held only as broadcast and critical-load backup.
Crypto.com Arena	3 x Hub 420	**450 kW**	1,260 kWh	Same grid-buffered profile. Three 150 kW units give broadcast and medical redundancy at the actual buffered load.
Rose Bowl	4 x Hub 630	**1,200 kW**	2,520 kWh	High field-lighting and broadcast peaks in a large open bowl. Four 300 kW units meet the peak with redundancy.
Sepulveda Basin	3 x Hub 630	**900 kW**	1,890 kWh	Off-grid: the array carries the full venue load, so higher-power 300 kW units are specified, three of them for peak plus one-unit redundancy with no grid to fall back on. Three 300 kW units cover the Section 1.2 peak with headroom and one spare unit.
Long Beach Zone	3 x Hub 420	**450 kW**	1,260 kWh	Off-grid but lower-draw water sports. Three 150 kW units match the modest peak while retaining redundancy for timing and safety

Venue / Zone	Config.	Hub Peak Power	Total Energy	Why this configuration
				systems. The three units cover the Section 1.2 peak with headroom.
Malibu / Coastal Zone	2 x Hub 210	**200 kW**	420 kWh	Smallest, fully off-grid venue. Two Hub 210 units at 100 kW each (200 kW) cover the minimal surfing-venue load, with Xos Solar System and HVO generator backup.
Media / IBC	5 x Hub 630	**1,500 kW**	3,150 kWh	24/7 broadcast core with the strictest redundancy requirement. Five 300 kW units enable a full dual-feed redundant configuration for global transmission.
Athlete Village (UCLA)	4 x Hub 420	**600 kW**	1,680 kWh	Accommodation and services on a clean grid tie. Four 150 kW units supplement the venue and distribute across the village to shorten cable runs.
Mobile Reserve / Surge	4 x Hub 630	**1,200 kW**	2,520 kWh	Surge capacity standardized on the highest-power 300 kW unit so a reserve can backfill any venue, including the 630-based sites.
Total	**37 units**	**~9.1 MW***	**20,160 kWh**	**Fleet mixes 630 and 420 units to match each venue's power and energy without over-provisioning.**

Sizing principle. The Hub 630 (300 kW) is the default unit at the highest-demand venues and the larger off-grid sites, where both power and redundancy matter. The Hub 420 (150 kW) and Hub 210 (100 kW) right-size lower-draw or grid-buffered venues, matching energy and power without stranding capacity in unused battery or inverter headroom. Standardizing on the 630 everywhere would either overshoot energy at the smaller venues or reduce redundancy granularity.

Unit ratings (per manufacturer): Hub 630 delivers up to 300 kW total (two channels, up to 150 kW each); Hub 420 delivers up to 150 kW total (two channels, up to 120 kW each); Hub 210 delivers up to 100 kW total (two channels, up to 50 kW each). Each channel is bidirectional and can operate independently or combined.

*Hub Peak Power is the maximum simultaneous AC output of the on-site array, not the venue's full demand. At grid-connected venues the array buffers and supplements the utility feed; at off-grid venues the Hub and Xos Solar System carry the full load, sized to the Section 1.2 peak.

Section 4: Carbon Intensity and Honest Accounting

LA28 has been clear that its targets will be met through real emission reductions, not purchased offsets. Becky Dale, Vice President of Sustainability for the Games, has framed the approach as reaching renewable energy through the grid wherever possible and turning to cleaner alternatives only where the grid falls short. That is where carbon accounting becomes strategic rather than cosmetic: the worth of any temporary power solution depends on what it actually emits at the point and hour it is used, and on whether that figure can be traced rather than asserted. It is the standard the AC Power Hub is built to meet.

Every kilowatt-hour it delivers can be followed from its source, whether on-site solar, stored off-peak grid power, or low-emission backup, to the load that consumes it, with no reliance on renewable certificates bought apart from the energy they represent.

The table below compares every energy source available to LA28 venues on a single generation and combustion basis, so each can be read against the diesel baseline it would replace. Two conclusions stand out:

1. The sources the AC Power Hub actually draws on, on-site Xos Solar System and off-peak grid power, sit well below diesel, and the on-site solar can be traced directly from panel to load.
2. Where a generator is unavoidable at a fully off-grid site, HVO renewable diesel holds the backup role at roughly a third of diesel's intensity. The result is a power solution whose emissions are not only lower than the conventional alternative but auditable at every venue.
3.

Energy Source	Carbon Intensity	PM2.5 at Point of Use	Context
Xos Solar System (direct generation)	0 g CO2/kWh	None	No fuel cycle. Lifecycle including panel manufacture is 45 g CO2/kWh, excluded here as equipment manufacture is excluded from every row [17]
California Grid, Off-Peak Daylight (LADWP)	150 to 220 g CO2/kWh	None at venue; grid emissions occur off-site	The cleanest off-peak hours in California are the midday solar hours, not the overnight hours. LADWP 2024 annual average is 229 g CO2/kWh [18] [16]
California Grid, Peak (LADWP 1-5 pm / SCE 4-9 pm)	280 to 350 g CO2/kWh	None at venue; grid emissions occur off-site	Gas peakers dispatched during afternoon and evening demand peaks. Hourly factors run 50% to 300% above the daily minimum [16]
Hydrotreated Vegetable Oil (HVO) Generator	200 to 250 g CO2/kWh	Non-zero; CO2 is cut but tailpipe particulates remain (about 0.02 to 0.03 g/kWh in a Tier 4 engine)	Used by Milan-Cortina 2026 for temporary power [13]. Full fuel life cycle basis; published reductions against diesel run 40% to 86% by feedstock [22]
Propane Generator Backup	600 to 800 g CO2/kWh	Low, non-zero	Shown for comparison only; the deployment specifies HVO, not propane, as the off-grid backup. Close to diesel on carbon (propane gensets run at 25% to 30% thermal efficiency); its only advantage over

Energy Source	Carbon Intensity	PM2.5 at Point of Use	Context
			diesel is lower particulate matter and NOx [20] [21]
Diesel Generator (historical reference)	700 to 800 g CO2/kWh	About 0.02 g/kWh (Tier 4 Final, 56 to 560 kW) or 0.03 g/kWh (gensets above 560 kW); up to ~10x higher on older Tier 2/3 units (Tier 3 PM was 0.20 g/kWh)	London 2012 baseline: 4 million liters consumed across all venues [6]. 2.68 kg CO2/liter at 0.26 to 0.30 L/kWh [20] [21]

PM2.5 shown at the point of use. Prime gensets must meet EPA Tier 4 Final, which caps particulate matter at 0.02 g/kWh for 56 to 560 kW engines and 0.03 g/kWh for gensets above 560 kW [24]; older Tier 2/3 units emit roughly 10x more (Tier 3 PM was 0.20 g/kWh). Combustion particulates cannot be eliminated through fuel choice alone. Only zero-combustion sources produce no on-site particulate emissions.

Charging the Hub off-peak is a cost decision, and in California the off-peak band is wide enough to make it a carbon decision at no additional cost. Southern California Edison prices every hour outside its 4 to 9 pm peak at the same off-peak rate, a band that runs from the evening through the following afternoon and contains both the overnight hours and the midday.

The carbon intensity inside that band is not flat: it runs 50 to 300 percent above its daily minimum depending on the hour, and the minimum falls in the middle of the day, when solar output is highest and the Xos Solar System is generating alongside it. Charging in the daylight portion of the off-peak band costs the same as charging overnight and delivers a materially lower carbon figure. Windows are set per venue against the serving utility's applicable schedule.

Section 5: AC Power Hub vs. Conventional Venue Power Solutions

The comparison below sets the AC Power Hub and Xos Solar System ecosystem against the two conventional options, diesel generators and permanent grid connections, across the criteria that matter most to a Games deployment: emissions, policy fit, deployment speed, redundancy, and what each leaves behind when the Games close.

Criteria	Diesel Generator	Permanent Grid Connection	Xos AC Power Hub + Xos Solar System
Zero-Emission Operation	No; combustion produces CO2, NOx, and particulate matter	No; grid carbon intensity varies with source mix and time of day	Yes; solar plus off-peak grid charging yields near-zero emissions
Compatible with LA28 Policy	No; contradicts the zero-emission commitment	No; requires permanent connections that break the reuse policy	Yes; no permanent installation, no diesel, no stranded assets
Deployment Timeline	Days to weeks; fuel logistics and site prep	9 to 16 months for new utility connections (CPUC data) [14]	Hours; no permits, excavation, or utility applications
Remote and Off-Grid Sites	Yes, but with diesel emissions and fuel resupply	Not feasible without new utility construction	Yes; via Xos Solar System plus low-emission generator backup
Broadcast Redundancy	Yes, through parallel generator sets	Yes, through dual grid feeds where available	Yes; dual channels per unit plus parallel-unit configuration
Scale Flexibility	Add generator units	Fixed at installed capacity from commissioning	Link 1 to 10+ units; 210 kWh to 6.3 MWh as demand requires
Noise and Air Quality	Significant; exhaust and engine noise affect the venue	None from the connection itself	Silent; no exhaust, no combustion, no fuel handling
Post-Games Asset Value	Generators return to rental fleet; no venue legacy	Connections stranded at temporary sites	Fully mobile; redeploys to events, film and TV, emergency response, construction
Procurement Vehicle	Standard rental or purchase	Utility contract; multi-year procurement	GSA, Sourcewell, OMNIA Partners, CORE California Approved Dealer

Criteria	Diesel Generator	Permanent Grid Connection	Xos AC Power Hub + Xos Solar System
Made in USA	Varies by manufacturer	N/A	Yes; California-designed, Tennessee-built; Buy American compliant

Section 6: Xos Credentials and Ecosystem Position

Delivering venue power to LA28's standard requires more than equipment. It requires a manufacturer that can build to a fixed Games schedule, deliver on it, and stand behind the units in the field for the duration of the competition. Xos brings an established manufacturing line, the certifications and procurement vehicles a public buyer needs, and units in active service inside LADWP's network today.

6.1 Manufacturing, Certifications and Procurement Vehicles

The AC Power Hub is designed in California and manufactured on an existing Xos line in Tennessee, and it is Buy American compliant. For a publicly funded deployment that carries twice: it removes the tariff and lead-time exposure that attaches to imported storage, and it satisfies domestic-content conditions on federal and state funding.

The AC Power Hub holds its own UL listings: UL1973 for the battery system and UL1741 for the power conversion equipment. It has also been tested to UL9540A, the test method for evaluating thermal runaway fire propagation, which requires physical units to be driven into thermal runaway. That testing produces the data fire officials use to set siting, separation and ventilation requirements, which is what a venue AHJ will ask for before a unit is placed.

The procurement vehicles are held by Xos rather than by any single product. Xos holds a Sourcewell Contract (#082625-XOS), a GSA Schedule listing, and approvals through OMNIA Partners and National Purchasing Partners Government, which together let government buyers procure without running a separate competitive bid. As a California CORE Approved Dealer, Xos products qualify for state incentive programs that apply to temporary clean-energy deployments.

6.2 The Xos Hub: Proven in the Same Market

LADWP, the region's main electrical utility and a central participant in LA28's energy planning, runs eight Xos Hub units with solar in active service today.[15] That product is a DC fast charger for commercial EV fleets. The AC Power Hub shares its battery platform and differs on the output side, delivering AC to a venue rather than DC to a truck.

The reference matters less for what it proves about the hardware than for what it establishes about the relationship. Xos is already a vendor of record inside the utility network LA28 depends on, with units installed, commissioned and under service. The grid-coordination conversations a Games-period deployment requires would not begin with an introduction.

6.3 Fit with LA28's Energy Framework

LA28's Impact and Sustainability Plan states that where the Games supplement the grid, they will lean on lower-carbon temporary technologies, batteries and solar chief among them.[2] That is a description of what the AC Power Hub and Xos Solar System already are. The plan also stresses keeping power use predictable and unobtrusive for the neighborhoods around each venue, and the Hub's remote monitoring over LTE and WiFi answers that directly, giving the energy team live visibility and control across all nine zones through the competition.

Section 7: Deployment Timeline and Execution

7.1 Phased Deployment Plan

The plan is built around a real constraint: the AC Power Hub enters its first trial deployment in 2026, and Phase 2, pilot testing and certification, is the gate that has to close before Games-scale deployment can begin. The schedule leaves enough lead time after that gate to stage every venue before competition opens.

Phase	Q3 2026	Q4 2026	Q1 2027	Q2 2027	Q3 2027	Q4 2027	Q1 2028	Q2 2028	Jul-Aug 2028	Post-Games	Key Milestones
Phase 1: Procurement and Site Assessment	■	■									*AC Power Hub units procured; site energy surveys at 13 venue zones; power load profiles developed per venue*
Phase 2: Pilot Testing and Certification		■	■	■							*First trial deployment completed; performance data collected; configurations verified for all venue types*
Phase 3: Xos Solar System Integration				■	■	■					*Xos Solar System arrays paired with Hub units at open-area venues; off-grid configurations commissioned at remote sites*
Phase 4: Games Staging and Integration					■	■	■				*Full Hub array staged at all venue zones; LA28 team integration; venue power protocols established*
Phase 5: Pre-Games Commissioning							■	■			*All venue units active; remote monitoring live; NBC broadcast power protocols verified; reserve units staged*
Phase 6: Olympic and Paralympic Games									■		*Full venue operations; 24/7 remote monitoring; dynamic redeployment as the competition schedule demands*
Phase 7: Post-Games Redeployment										■	*Units transitioned to events, film and TV, construction, emergency response, and municipal operators*

7.2 Site Requirements

The Hub is built to need almost nothing from the site, which is what makes it work at temporary venues. A standard deployment asks for a flat, stable surface for the unit, a physical security perimeter of ordinary event fencing, and either a commercial electrical connection of at least 200A and 480V three-phase for grid-supplemented sites or no connection at all where the Xos Solar System runs the site off-grid. The Xos Solar System arrays need flat open ground or a hard surface with clear sun and room for wind. Nothing else follows: no trench permits, no transformer procurement, no utility applications, no

excavation. The Hub works with what the venue already has, or with nothing at all where solar and an HVO generator backup carry the full load.

Section 8: The Post-Games Legacy

Every Hub unit and Xos Solar System array sent to LA28 is mobile, and every one of them can move again the day the competition ends. Where permanent grid connections stay behind at the venue and diesel fleets return to a rental pool that gives the host city nothing, the Xos equipment rolls straight into markets that already want mobile, zero-emission power.

Live events are the nearest of those markets. Festivals, concerts, and sporting events face rising pressure from host cities and sponsors to drop diesel generators, and a post-LA28 fleet of AC Power Hubs is ready for that work the week after the closing ceremony. Southern California's film and television industry is the next: location shoots need temporary power constantly, and a silent, emission-free Hub competes head-on with the generators that run productions today. Remote construction and industrial sites, named in the Hub's own product brief, add a third standing source of demand for high-capacity power without a grid tie.

Emergency power is the use with the clearest buyer, because the buyer already exists and already runs the operation on a budget. When Southern California Edison de-energizes circuits ahead of high winds, it opens Community Resource Centers at sites it has contracted in advance across high fire risk areas. Those centers run device charging, medical equipment charging, Wi-Fi and ADA-accessible washing stations for as long as the circuit stays down, and they open precisely because the power is off. The load is modest, the duration is measured in days, and the site is known before the event. That is the AC Power Hub's operating envelope exactly.

Cooling centers are the same problem on a different trigger. They open from mid-May through September, when heat is most dangerous for seniors, infants and people with chronic conditions, and their entire function is air conditioning during the hours the grid is under the most stress. A diesel generator parked outside one runs loud and exhausts fumes next to the people who came there because they are vulnerable to exactly that.

Two things that read as sustainability at a Games read as operations here. The Hub is silent and emits nothing, so it can sit against an occupied building through the night. And it needs no permits, no excavation and no fuel delivery, which is what makes it deployable inside an emergency window rather than after one. A generator cannot be permitted during a wildfire.

The arithmetic is what makes it a purchase rather than a preference. A 630 kWh Hub carries a resource center load of roughly 20 kW for about thirty hours on stored energy alone. Paired with a Xos Solar System array generating 450 to 540 kWh across a day of sun, it holds that load for the length of the event without a fuel delivery, and it is recharged and ready for the next circuit before the winds drop.

For city and county agencies the procurement side is already solved. The Sourcewell, GSA and OMNIA Partners routes make the Hub a straightforward buy for public events, infrastructure work and disaster preparedness, without a fresh round of bidding each time. An agency that stages Hubs for the Games holds a mobile emergency power fleet the following fire season, bought once.

> *The AC Power Hubs deployed for LA28 do not go into storage when the Games end. They leave with an operating record earned at Olympic scale, and they carry it into the markets that need that capability next.*

Section 9: Stakeholder Engagement

Powering the venues to LA28's standard depends on a network of organizations, each with its own mandate, its own responsibilities, and its own decision to make on its own timeline. Xos already works with several of them through the Xos Hub fleet charging program, and is opening conversations on AC Power Hub deployment for the venues themselves.

Stakeholder	The Shared Challenge	Role and Xos Engagement
LA28 Organizing Committee	Delivering 100% renewable venue power without permanent infrastructure across 40+ venues in nine zones.	Holds primary authority over Games energy contracts. The AC Power Hub is the technology the Games' own plan describes when it names batteries and solar as the alternatives to diesel.
LA28 Energy Team	Running the largest temporary power overlay in Olympic history while keeping venue power from disturbing nearby neighborhoods.	The counterpart for deployment planning. Remote monitoring and load management answer the neighborhood-impact concern the team has raised publicly.
NBC Sports / Olympic Broadcast Services	Guaranteeing uninterrupted power for live global broadcast from every venue at once.	Dual independent channels per unit and parallel-unit redundancy give live Olympic transmission the reliability it cannot do without.
LADWP	Supplying grid power to venues while holding peak demand steady through a hard summer for the regional grid.	An active Xos Hub customer with eight units running. A natural partner for off-peak charging coordination during the Games and for redeployment after.
Southern California Edison	Holding grid reliability across SCE-territory venues at peak summer demand while backing LA28's renewable commitment.	The utility partner for SCE-served zones. Off-peak Hub charging pulls Games-period load off SCE's afternoon peak.
Venue Operators (SoFi, Rose Bowl, Coliseum, Intuit Dome)	Meeting LA28's renewable-energy requirement without permanent changes to the building.	Each is accountable for energy compliance during the Games. The Hub supplies zero-emission power with no venue modification and nothing left behind.

Stakeholder	The Shared Challenge	Role and Xos Engagement
City of Los Angeles / Mayor's Office	Making good on public sustainability commitments without straining neighborhood power or air quality.	Silent, emission-free operation and smart grid management back the city's commitment while protecting reliability for surrounding communities.
LACI / Transportation Electrification Partnership	Turning LA28's clean-energy commitments into infrastructure that leaves a real legacy.	Its Going for Gold Blueprint named mobile energy assets a priority. The AC Power Hub carries that from fleet charging into venue power.
California Energy Commission	Backing catalytic clean-energy investments with a verified post-Games use through Fast Charge California and related programs.	GSA and Sourcewell procurement and a documented redeployment plan line up with CEC's objectives for catalytic temporary infrastructure.

Section 10: The Path Forward

LA28 has set itself a task no host city has faced on this scale: powering every venue on renewable energy, across nine zones, without leaving a single permanent connection behind. The AC Power Hub and Xos Solar ecosystem is built for that exact combination, and the window to plan and deploy it at the scale the Games need is open now.

Xos is ready to take the next step with the organizations that own LA28's energy plan. We propose five to begin:

- A working meeting with the LA28 energy team to present the AC Power Hub and Xos Solar ecosystem in full, walk through the venue-by-venue model, and agree on the scope of a Games-period venue power program.
- A technical review with NBC Sports and Olympic Broadcast Services to test the Hub's dual-channel redundant configuration against their broadcast power specifications for live transmission.
- A coordination session with LADWP and Southern California Edison to set the off-peak charging protocol for Hub units at grid-connected venues, building on the relationship already in place through the Xos Hub fleet.
- A site survey at the priority off-grid venues, Sepulveda Basin, Long Beach, and Malibu, to confirm the Hub-and-Xos Solar System configuration meets the energy load and the deployment window at each.
- A commercial term sheet for a supply and service agreement covering the full LA28 window, from pre-Games pilot testing through venue operations to post-Games redeployment.

Together these move the conversation to a real commitment while there is still time for pilot testing and full commissioning before the Games. The organizations reading this are the ones whose decisions will settle whether LA28's venue power commitment holds up in practice, and Xos is ready to start with whichever step matters most to them first.

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Methodology and Calculation Basis

The figures in this document are engineering estimates built from published benchmarks and manufacturer ratings. LA28 has not released venue-level energy data, so every venue number here is a planning scenario, not confirmed demand. This appendix sets out how each figure was derived, so the assumptions can be checked and replaced with measured data as it becomes available.

A. Venue Energy Demand (Section 1.2)

Permanent stadiums and arenas were scaled from two published benchmarks: 10,000 to 20,000 kWh per event day for a 70,000-seat stadium [8], and a 15-minute peak of 2.5 to 9 MW for a major arena [9]. Each venue's daily energy and peak were placed within those ranges according to seating capacity, operating profile, and the added broadcast and field-of-play load specific to Olympic competition. The Coliseum (80,000 seats, ceremonies plus athletics) sits near the top of the peak range at 6 to 9 MW and about 15,000 kWh per day; the Intuit Dome figure of 6.5 MW is published data [9], not an estimate.
The temporary off-grid venues were benchmarked differently, against published temporary-event power figures rather than permanent-stadium data, because their footprint is far smaller. A festival main stage draws roughly 250 to 400 kW, and a broadcast compound carries redundant technical power. On that basis Sepulveda (multiple action-sports courses plus broadcast and lighting) is estimated at 0.6 to 0.8 MW peak and about 2,000 kWh per day; Long Beach (water sports, mostly daytime) at 0.3 to 0.4 MW and 1,400 kWh; and Malibu (surfing, judging and broadcast feed only) at 0.1 to 0.15 MW and 600 kWh.

B. Deployment Sizing (Section 3.4)

Each unit is rated per manufacturer: the Hub 630 delivers 300 kW from a 630 kWh battery, the Hub 420 delivers 150 kW from 420 kWh, and the Hub 210 delivers 100 kW from 210 kWh. Units were selected so that installed AC power meets or exceeds the venue peak (with roughly one unit of redundancy at off-grid and broadcast-critical sites) and so that stored energy plus Xos Solar System daytime generation meets or exceeds the daily energy. Sepulveda illustrates the off-grid method: a 0.6 to 0.8 MW peak is met by three Hub 630 units (900 kW, covering the peak with headroom and one spare), and the 2,000 kWh daily requirement is met by 1,890 kWh of battery plus 450 to 540 kWh from a Xos Solar System array, for 2,340 to 2,430 kWh available. At grid-buffered venues the Hub is sized only to the afternoon-peak draw it shifts off the utility, not the full venue load, which the grid still carries; that is why Crypto.com Arena takes three Hub 420 units (450 kW) rather than enough to cover its 4 to 6 MW connected demand. The Intuit Dome, already equipped with ~2 MW of rooftop solar and an 11 MW battery system,[23] carries a single Hub 420 as broadcast backup only. Across the network this yields 37 units, about 9.1 MW of installed Hub power, and 20,160 kWh of storage.

C. Carbon Intensity (Section 4)

Every row is compared on the same generation-and-combustion basis, with equipment manufacture excluded throughout. Diesel is 2.68 kg CO2 per liter [20] at 0.26 to 0.30 liters

per kWh [21], which gives 700 to 800 g CO2/kWh. Propane, at about 1.5 kg CO2 per liter and 0.40 to 0.50 L/kWh [21], gives 600 to 800 g/kWh. HVO renewable diesel is shown at 200 to 250 g/kWh, consistent with published lifecycle reductions of 40 to 86% against diesel [22]. Xos Solar System is 0 g/kWh at the point of use because it has no fuel cycle; its 45 g/kWh lifecycle figure [17] is noted but excluded to match the other rows. LADWP's grid is anchored on its 2024 annual average of 229 g/kWh (505 lb CO2e/MWh [18] converted at 453.6 g per pound) with the off-peak daylight band placed below that average, at 150 to 220 g/kWh, because the midday solar hours are the cleanest and hourly factors swing 50 to 300% above the daily minimum [16].

D. Post-Games Legacy Figures (Section 8)

The emergency-power figures follow directly from the unit ratings. A 630 kWh Hub serving a 20 kW resource-center load runs for 630 divided by 20, or 31.5 hours, on stored energy alone. Paired with a Xos Solar System array generating 90 kW across five to six peak-sun hours (450 to 540 kWh per day), it sustains that load through a multi-day outage without a fuel delivery. The Xos Solar System rating itself is 152 panels at 600 W each, or 91.2 kW, rounded to 90 kW, and about 150,000 kWh per year at average peak-sun hours.

References and Data Sources

[1] LA28 Organizing Committee. Games Plan. 100% existing and temporary venues; commitment to radical reuse and return of all temporary venues to their original state. la28.org/en/games-plan.html

[2] LA28 Organizing Committee. "Impact and Sustainability Plan." August 25, 2025. Commitments include 100% renewable electricity for venues; minimizing temporary power use; maximizing batteries and solar where the grid is supplemented; at least 90% of temporary infrastructure materials reused or recycled; and reducing operational and construction emissions by at least 10% versus Paris 2024. la28.org/en/newsroom/la28-releases-impact-and-sustainability-plan.html

[3] Daily Trojan. "LA28 sustainability panel explores energy strategy for the Olympics." March 5, 2026. Holly West, Head of Energy for LA28, described the Games as the largest temporary power overlay in the history of the Games. dailytrojan.com/2026/03/05/la28-sustainability-panel-explores-energy-strategy-for-the-olympics

[4] Forbes. "How LA 2028 Plans To Create The Most Sustainable Olympics Yet." September 24, 2025. Becky Dale, VP of Sustainability for LA28. forbes.com/sites/blythelawrence/2025/09/24/how-la-2028-plans-to-create-the-most-sustainable-olympics-yet

[5] Modern Power Systems / NS Energy. "An unprecedented display of power." Beijing 2008 Olympics power report. The International Broadcast Centre required 46 generating units and 80,000 metres of cable to supply 48.2 MVA, the largest temporary power requirement in Olympic history at the time. modernpowersystems.com/features/featurean-unprecedented-display-of-power

[6] Global Climate Initiatives / EDF. "Paris 2024: A Sustainable Model for the Future." London 2012 Olympics consumed 4 million liters of diesel to power venues with generators. globalclimateinitiatives.com/en/jeux-olympiques-de-paris-2024-un-modele-pour-lavenir

[7] France 24 / Enedis. "No more dirty diesel for Paris Olympic sites." April 30, 2024. Nicolas Perrin, Paris director of Enedis: an evening of French Ligue 1 football burns roughly 4,000 liters of diesel and emits about 12 tonnes of CO2. Paris 2024 grid connections avoided the equivalent of 13,000 tonnes of carbon emissions. france24.com/en/live-news/20240430-no-more-dirty-diesel-for-paris-olympic-sites

[8] Power Integrations. "The Sport of Stadiums Going Green." A 70,000-seat stadium can consume between 10,000 and 20,000 kWh on gameday. power.com/community/green-room/blog/sport-stadiums-going-green

[9] Electrical Contractor Magazine. "Kickoff to Smart Stadiums." April 15, 2026. The Intuit Dome experiences a 6.5 MW peak average demand on game days. ecmag.com/magazine/articles/article-detail/kickoff-to-smart-stadiums

[10] The Sports Examiner. "LA28 Organizing Committee releases Impact and Sustainability Plan." September 1, 2025. thesportsexaminer.com/los-angeles-2028-organizing-committee-releases-impact-and-sustainability-plan

[11] USC Viterbi School of Engineering. "Powering LA28: Energy, Infrastructure and the Future of Los Angeles." March 23, 2026. LADWP currently at 64% clean energy; targeting 100% clean energy by 2035. viterbischool.usc.edu/news/2026/03/powering-la28-energy-infrastructure-the-future-of-los-angeles

[12] Spectrum Local News. "What we know about the 2028 LA Olympics so far." January 14, 2026. The Athletes Village at UCLA has committed to 100% clean electricity. spectrumlocalnews.com/us/snplus/sports/2026/01/14/la28-2028-olympics-what-we-know-so-far

[13] PBS News. "How organizers of the 2026 Winter Games made clean energy a priority." February 21, 2026. Enel supplied 85 GWh for Milan-Cortina 2026. Hydrotreated vegetable oil was substituted for diesel where temporary power generation was required. pbs.org/newshour/science/how-organizers-of-the-2026-winter-games-made-clean-energy-a-priority

[14] California Public Utilities Commission. Comments filed on EVSE deployment timelines, May 2022. Utility interconnection averaged 38 weeks after construction was complete; service installation averaged a further 31 weeks. docs.cpuc.ca.gov

[15] Xos, Inc. internal deployment records. Eight Xos Hub units with solar panel products in active operation with the Los Angeles Department of Water and Power as of June 2026.

[16] Zhang, X., Martin, E., and Shaheen, S. "The Dynamics of the California Electric Grid Mix and Electric Vehicle Emission Factors." Institute of Transportation Studies, UC Berkeley, 2025. CAISO grid mix evaluated at five-minute intervals, April 2018 to April 2023. Average emissions rate of 301 g CO2-e/kWh over five years; maximum hourly grid emission factors in California run between 50% and 300% above the minimum depending on time of year. https://its.berkeley.edu/publications/dynamics-california-electric-grid-mix-and-electric-vehicle-emission-factors

[17] Hsu, D. et al. "Life Cycle Greenhouse Gas Emissions of Crystalline Silicon Photovoltaic Electricity Generation: Systematic Review and Harmonization." Journal of Industrial Ecology, 2012. NREL Life Cycle Assessment Harmonization Project. Harmonized median of 45 g CO2-eq/kWh across 42 estimates, interquartile range 39 to 49. https://www.nrel.gov/analysis/life-cycle-assessment

[18] California Energy Commission. "2024 Power Content Label: Los Angeles Department of Water and Power." LADWP Power Mix greenhouse gas emissions intensity of 505 lbs CO2e/MWh, equivalent to 229 g CO2e/kWh, against a California utility average of 359 lbs CO2e/MWh. 2024 LADWP mix: 41% RPS-eligible renewables, 15% nuclear, 3% large hydroelectric, 30% natural gas, 11% coal and petroleum. https://www.energy.ca.gov/filebrowser/download/9140

[19] California Independent System Operator. "Today's Outlook: Emissions." Near-real-time CAISO grid emissions data. https://www.caiso.com/todays-outlook/emissions

[20] U.S. Environmental Protection Agency and U.S. Department of Transportation. Federal Register, 2010. Conversion factor of 10.180 x 10-3 metric tons of CO2 per gallon of diesel fuel, equivalent to 2.68 kg CO2 per liter.

[21] Generator fuel consumption derived from fuel energy content and genset efficiency: diesel (lower heating value ~10 kWh/L) at 30% to 40% thermal efficiency yields 0.26 to 0.30 L/kWh; propane (~7 kWh/L) at 25% to 30% efficiency yields 0.40 to 0.50 L/kWh.

[22] "Life Cycle Greenhouse Gas Emissions of Biodiesel and Renewable Diesel Production in the United States." Environmental Science and Technology, 2022. Life-cycle greenhouse gas reductions for renewable diesel range from 40% to 86% compared with petroleum diesel depending on feedstock. https://pubs.acs.org/doi/10.1021/acs.est.2c00289

[23] Engineering News-Record. "Iconic Intuit Dome Realizes A Sustainable Vision." February 5, 2025. 2 MW of rooftop solar feeding 11 MW of battery storage. enr.com/articles/57216-iconic-intuit-dome-realizes-a-sustainable-vision

[24] U.S. Environmental Protection Agency, nonroad compression-ignition engine standards, 40 CFR Part 1039 (Tier 4 Final); stationary gensets under 40 CFR Part 60, Subpart IIII. Particulate matter capped at 0.02 g/kWh for engines 56 to 560 kW and 0.03 g/kWh for generator sets above 560 kW. Summary table: DieselNet, Emission Standards: USA, Nonroad Diesel Engines, dieselnet.com/standards/us/nonroad.php

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