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SUSTAINABILITY **MATTERS**

Resilience

Summer // 2026

Glumac's Quarterly Journal of
Thought Leadership in the Built Environment

Resilience

\re·sil·ience\ noun
an ability to recover from or adjust easily to misfortune or change

In this issue, we examine **the growing mandate for resilience in the built environment**. Glumac's leaders in the Pacific Northwest and California discuss meeting their regions' specific challenges through a resilience framework. And our leader in Distributed Energy Resources looks at how looking to the past is delivering solutions for the future.

Fast Facts from this Issue

- For every $1 of investment in up front resilience efforts, $13 is saved in economic impact and cleanup costs // pg. 3
- Distributed energy solutions have origins in the earliest days of electric light in Chicago // pg. 4
- A smart way to sequence backup systems: battery storage and PV to cover the vast majority of routine outages, while keeping a smaller fossil-fuel generator for the true edge case // pg. 7
- A major tailwind to greater resilience in California is born out from a greater regional push for electrification and decarbonization // pg. 11

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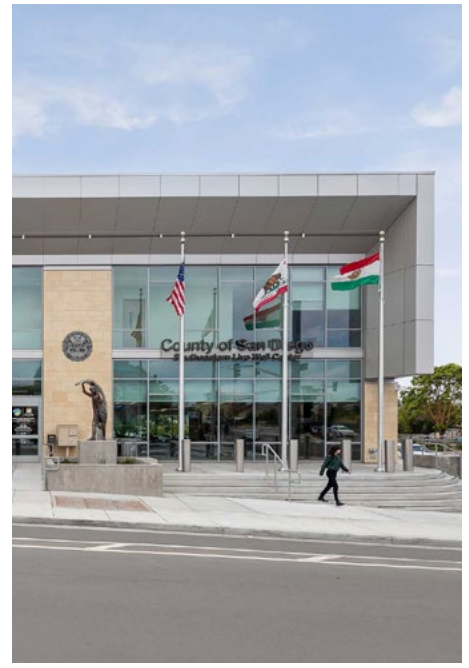

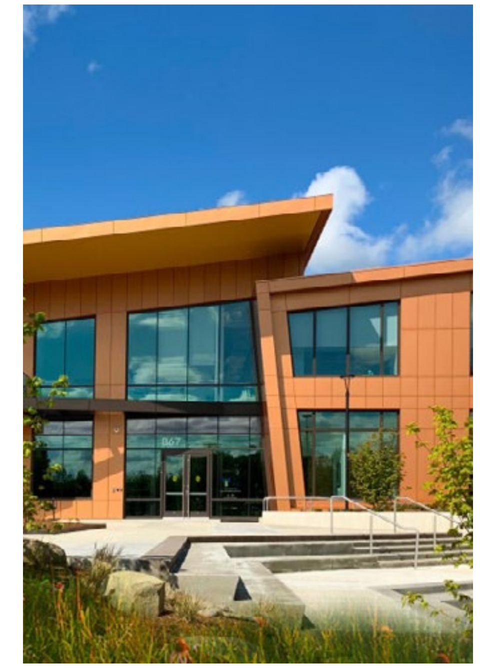

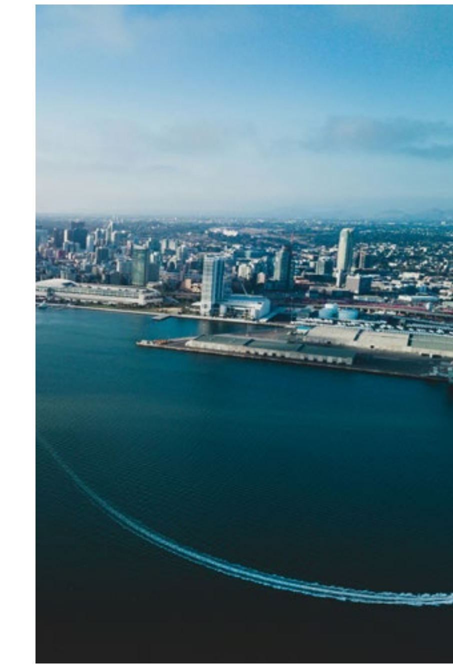

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Introduction

Resilient design is no longer a future-facing ideal; it is a practical necessity for today's buildings. This article explores how project teams can move resilience into the basis of design, assess local exposure, protect operations, and create buildings prepared for disruption, recovery, and long-term performance in changing conditions over time.

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Q&A: Distributed Energy Resources

We sit down with Glumac's Distributed Energy Resources (DER) expert Nick Pedersen to discuss its impact on resiliency, and how looking to the past is helping designers prepare for the future.

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Many Pacific Northwest buildings are not prepared for a major disruption day. This article explores how resilient design can address power loss, heat loss, access issues, and operational continuity by focusing on critical building functions, layered systems, and practical, future-facing resilience strategies.

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State of the Market - Southern California

Simon Ubhi, Glumac's Southern Region Portfolio Lead, explores how heat, smoke, drought, outages, and seismic risk are reshaping building design, and why resilient strategies must move beyond backup power toward multidisciplinary, operational planning built for continuity and recovery at scale.

SOUTHEASTERN LIVE WELL CENTER, San Diego, CA
This facility pairs an all-electric, net-zero energy pathway with flood-smart siting and protection, helping it withstand a 100-year flood event without damage.

Introduction

For years, resilient design in the built environment was treated as something to revisit after a major storm, wildfire, flood, or power outage. However, mindset no longer fits the reality project teams and owners face today.

The built environment is under pressure from more frequent and severe climate events, aging infrastructure, utility instability, and growing demands on health, safety, and continuity. In that context, resilient design is no longer a premium feature. It **belongs in the basis of design**.

At its core, resilience is the ability to prepare and plan for disruption, absorb impact, recover function, and adapt over time. That definition matters because it shifts the conversation away from one-off protective measures and toward long-term performance. A resilient building is not simply hardened against a single event. It is designed to keep people safe, support community operations, protect assets, and remain useful in changing conditions.

When Resilient Design Should Begin on a Project

That distinction is important because resilient design integrations on a project are often reduced to backup generators and emergency power. Those systems are often essential, but a resilient approach needs to be more holistic. It may need to include onsite water storage to support firefighting, HVAC strategies that allow temporary cooling connections, passive survivability measures, flood protection, thermal comfort measures during prolonged outages, and planning for continuity across mechanical, electrical, plumbing, enclosure, and operational systems. In other words, resilience is not a single system decision. It is a multidisciplinary design approach.

This is why resilient design should begin early. The best moment to discuss it is during scope development, when teams can align hazards, priorities, and investment with project goals. Waiting until late design after a disruption; narrows options and raises cost.

Where to Start with Resilient Design: A Study of Exposure

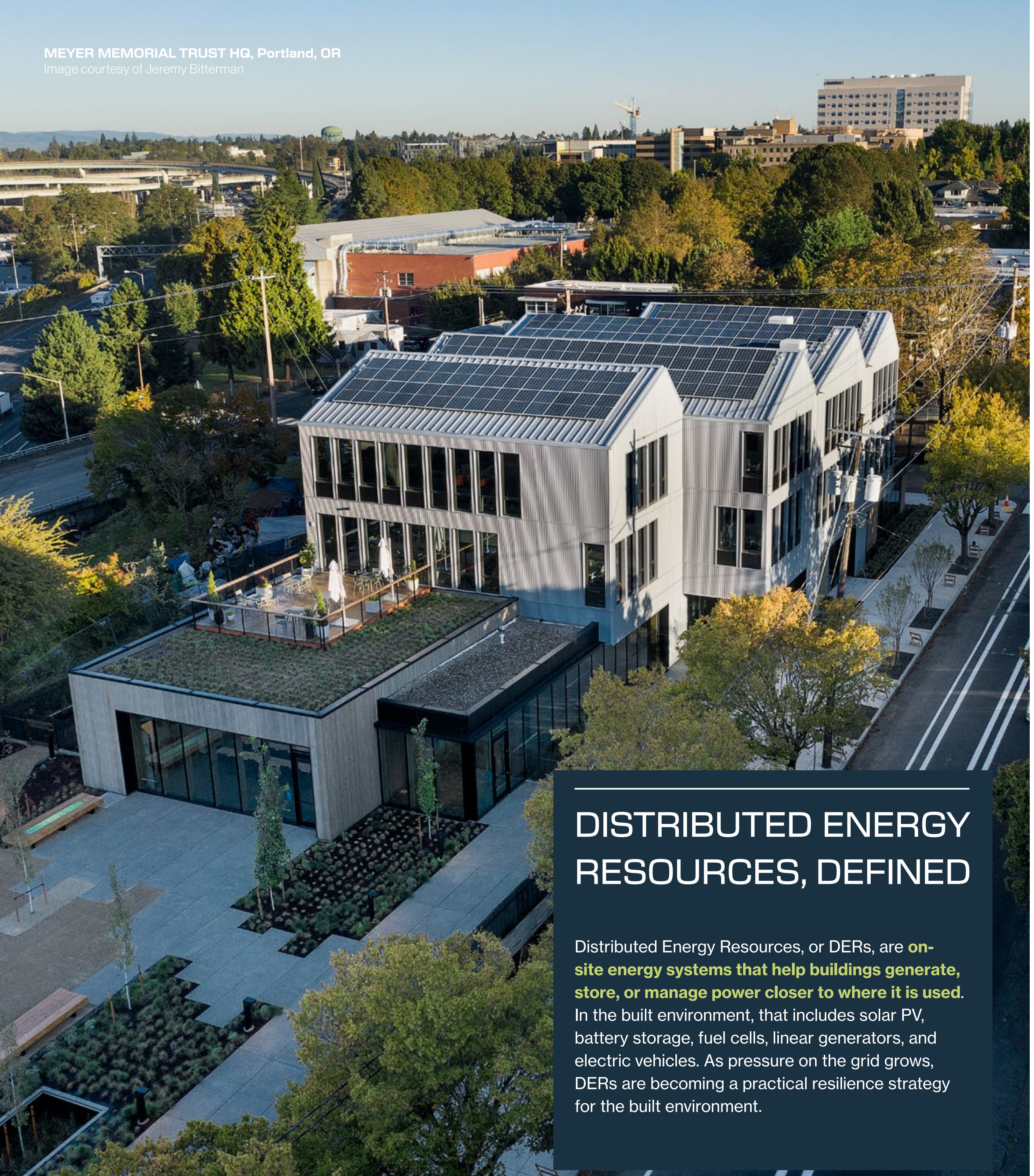
A practical approach starts with looking at a building's geographic exposure. What are the local hazards most likely to threaten occupant safety, building operations, or asset value? In one region, it may be wildfire smoke and grid instability. In another, flooding and extreme heat. From there, teams can evaluate mitigation options using resources such as the Department of Energy's Technical Resilience Navigator or NOAA's U.S. Climate Resilience Toolkit. The goal is to make risk visible and able to be actioned on.

This can make resilience seem like an added cost. But the more useful framing is avoided loss. Power interruptions, system failures, and water disruptions can carry operational, financial, and human consequences that far exceed the cost of proactive measures.

A recent U.S. Chamber of Commerce finding shows that every $1 invested in resilience can yield $13 in avoided economic impact and cleanup costs. That is a compelling return, but the business case is only part of the story. In healthcare, housing, education, and community-serving buildings, resilient design can also preserve community safety, dignity, and continuity when it matters most.

The industry imperative is clear: resilient design must become standard practice. Because every community faces risk, and every project deserves a design process that acknowledges it. The most effective resilience strategies are not generic checklists. They are locally informed, interdisciplinary, and tied to the outcomes owners and occupants rely on every day.

That is the position we believe the industry should take now: resilient design is fundamental to sustainable design, to responsible engineering, and to creating buildings that are prepared not just for today's pressures, but ready to address tomorrow's realities.



MEYER MEMORIAL TRUST HQ, Portland, OR
Image courtesy of Jeremy Bitterman

DISTRIBUTED ENERGY RESOURCES, DEFINED

Distributed Energy Resources, or DERs, are **on-site energy systems that help buildings generate, store, or manage power closer to where it is used**. In the built environment, that includes solar PV, battery storage, fuel cells, linear generators, and electric vehicles. As pressure on the grid grows, DERs are becoming a practical resilience strategy for the built environment.

The Growing Role of Distributed Energy in the Built Environment

Sitting down with the architect of Glumac's approach to resilient design to discuss where the industry is going, and how the past is predicting the future of resiliency in building design.

Nick Pedersen, PE
Sr. Distributed Energy Resources Engineer

Tell us a bit about your background and what you do at Glumac.

I am a Senior DER engineer. DER stands for Distributed Energy Resources, so I focus on projects that involve on-site generation and storage, things like solar PV, battery storage, fuel cells, linear generators, and electric vehicles. I am an electrical engineer by training, but what I really enjoy is that this role lets me work across both our energy and engineering teams. I have a pretty diverse background too. I earned a BS in electrical engineering, picked up an MBA while I was working, and spent time in industrial automation, technical consulting for consumer electronics, MEP, performance contracting, and DER and microgrid systems. Now, bringing renewable energy and resilient electric power to building owners is the part that feels especially meaningful.

What led you to focus on this area? Where does the passion come from?

Around 2012, I was working on consumer products. I had a great job and the company treated me very well, but after a lot of reflection, I realized I wanted to do good with the education and experience I had, and I wanted to put my PE license to better use. That is what pulled me toward energy. Once I got into building systems and DER work, it clicked. There is a real

THE COST OF CONSEQUENCES

Resilience often loses out because owners see the upfront cost, but not the downstream risk. **The real missing metric is the cost of consequences: lost operations, lost revenue, public safety impacts, and ripple effects across a community**. For example, consider a hospital weighing a $1 million resilience investment against a revenue-generating MRI machine. We need to have emperical answers at the ready to address that very real question.

A U.S. Chamber of Commerce Report found that **for every $1 of investment in resilience, $13 is saved** in economic impact and cleanup costs.

opportunity to make buildings better, modernize older buildings instead of replacing them, and help clients respond to growing pressure on the grid and from climate-related disruptions.

When we talk about resilience in the built environment, how should the industry be approaching it? What are we still missing?

The first thing you learn in this industry is that cost and value drive everything. Clients may have the best intentions in the world, but every project has a maximum budget, and resilience almost always adds first cost. What we are missing is the cost of consequences. Too often, we try to make the case for resilience emotionally when we really need more empirical data and clearer financial arguments. If a factory is down for three days, what does that cost? If a school closes for two weeks, what does that do to students, families, and the surrounding community? If a hospital loses power, what is the real cost of that failure? Those are the questions that should be front and center.

You mentioned a hospital project that has stayed with you. What happened there?

The state had threatened to shut that hospital down several times because of damaged and insufficient electrical gear. We developed a proposal to fix the system and add resilience for likely risks like long-term outages, sea level issues, and tidal events. The project was close to $1 million. The CEO told us, essentially, “I can spend $1 million to make the state happy, or I can spend it on an MRI machine that brings in revenue.” I was stunned. In hindsight, I wish I had been ready with a much stronger financial argument, one that laid out the cost of a multi-week shutdown in dollars, community impact, and public health. That experience really sharpened for me how often resilience loses out when owners only see the upfront expense.

There is that statistic that every $1 spent on resilience saves $13 later. Are the numbers on this still too squishy, or do people just not grasp what they really mean?

Honestly, both. As an engineer, I will always say broad statistics like that are a little squishy because you can poke holes in them. But they are still useful. They give people a place to start. The challenge is that a single business owner is usually looking at their own P and L (Profit and Loss), not total economic impact across a community. So when they hear that $13 figure, they may think it is too abstract. What we need to do better is connect those larger numbers to specific operational consequences. Data centers understand that instinctively because they know exactly what downtime costs. Other owners should be asking the same question. And many of the consequences are not purely financial. If a school shuts down, what happens to learning time? What happens to a parent who suddenly has no childcare and cannot go to work? We do not do enough to quantify those ripple effects.

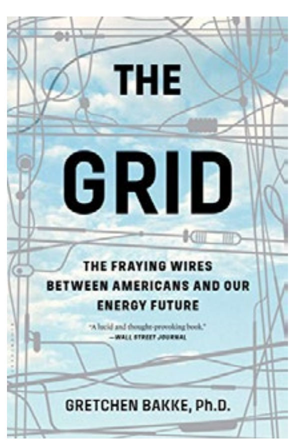
It sounds like part of this is really a mindset shift, from viewing a building as a standalone asset to seeing it as part of a larger ecosystem.

Absolutely. I have always believed you get what you measure. If an owner measures revenue and cost, then everything else becomes secondary. But buildings do not exist in isolation. If one building stops operating, or goes vacant, it affects the buildings around it, the businesses around it, property values, safety, and tax revenue. We tend to focus on how something affects me instead of how it affects my neighbor, and resilience pushes against that. It asks us to think more broadly about the role a building plays in a community.

How much do geography and regional risk change the way you consult on resilient design?

On the surface, geography matters a lot because the hazards are different everywhere. But once you get below that first layer, the more important question is what the building is there to do every day. A county office building in Santa Monica, Chicago, or Houston still has a mission. The same is true for schools, hospitals, factories, and residential buildings. Twenty years ago, geography was harder to account for because the information was not as accessible. Now there are strong resources online, including the U.S. Climate Resilience Toolkit and the Technical Resilience Navigator, that make hazard information and mitigation strategies much easier to understand. So today, the more actionable conversation is often about the client's operational goals. If the client loses power for three days, what happens? Does it put lives at risk? Does one day of downtime cost more than installing a generator?

What are you reading on this subject right now?



It's 10 years old now, but a book I come back to a lot is *The Grid* by Gretchen Bakke. The book does this deep dive into how our grid came to be and how it's something we completely take for granted today. But it changed our country. And it's a marvel that it was built. But, we're just not maintaining it. And that's a big problem. One great anecdote from the book that I particularly liked, though, is a section where Bakke talks about how Edison is known for making a cost-effective light bulb. But at the time people didn't have electric power in their buildings. And so, where he really made money was designing generators and installing them in buildings. So around New York City, all the new big buildings would have a generator in the basement, providing power for their electric light. And then one of his proteges took that idea to Chicago and put generators all over Chicago. So, in essence, we actually have had on-site power before we had a grid. Now we're starting to see a shift in the industry back to this idea of data centers should have their own private power plant. And manufacturing plants needing so much power, and the grid's failing, so let's build on-site power for the manufacturing plant. We're kind of getting back to something that's already happened, which is a cool way to look at it.

What is next in this space? What should people be watching?

Data centers are the hottest topic right now, and not just because of their electrical loads. They force people to think seriously about resilience in every dimension. Someone will ask, "Why put a data center in Arizona if cooling is so hard there?" The answer is that Arizona avoids other risks like tornadoes and hurricanes. That tradeoff mindset is important. Owners have to decide which risks they are willing to accept and which ones they need to design around. More broadly, the national gird is failing. In many places it is getting worse, especially as things like wildfire risk grow. That makes on-site power and distributed energy increasingly important. Nationally, there is a shortage of experienced engineers and developers to support that transition, but we will get there. On the more technical side, small modular reactors are one of the most fascinating things to watch. The technology is compelling, but the timeline and economics of licensing and deployment are still major hurdles.

Reach out to Nick Pedersen at **npedersen@glumac.com**

WHAT TO WATCH NEXT

Data centers are forcing a broader conversation about resilience because they make the cost of downtime impossible to ignore. **That pressure is accelerating interest in on-site power and distributed energy, especially as grid instability grows in many regions**. Small modular reactors are one of the more compelling technologies on the horizon, even if licensing and economics remain major hurdles.

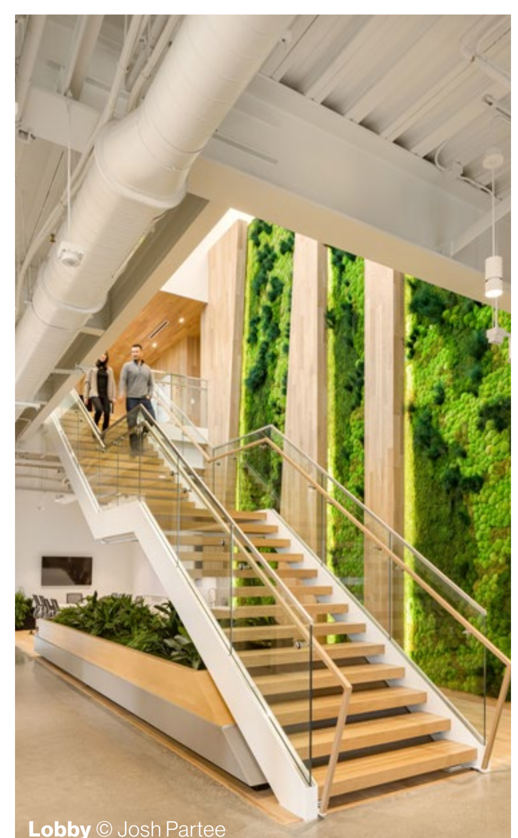
project profile

Oregon State Treasury

The Oregon Treasury is the state's financial services center. The government department came to Glumac to partner on designing its new headquarters building with a high bar for resiliency. It needs to operate through a variety of disruptions, and withstand a 9.0 earthquake. Because when disaster strikes, money needs to move to facilitate recovery. Simply put, **this building cannot afford to fail**.

Front exterior © GBD Architects

Project is located on a flood plain and in the Cascadia Moderate - Heavy expected damage zone



Lobby © Josh Partee

The new two-story Oregon State Treasury (OST) facility is a demonstration of resilient design, designed to protect occupants from a Cascadia Subduction Zone magnitude 9.0 earthquake, floods, wildfires, windstorms, and/or a volcanic eruption. It is designed to be operational 24/7 post-disaster for the 100 full-time OST staff, as well as support visiting staff from other state agencies.

Glumac provided mechanical, electrical, plumbing, and lighting design, along with technology integration services. Glumac integrated resiliency into every aspect of the design including seismic bracing of mechanical equipment and light fixtures, mixed-mode natural and mechanical ventilation, and renewable energy systems that allow the building to maintain occupancy after major emergencies.

The Treasury Resiliency Building is the first USRC Platinum-rated building in Oregon and the first USRC-rated seismically isolated building in the United States. It not only achieves a USRC Platinum rating at the design-basis earthquake (as required by the USRC methodology) but also at the Risk-Targeted Maximum Considered Earthquake (MCER) as a result of the seismic isolation system.

Can Operate
90+
HOURS OFF GRID

Microgrid © KPFF

RESILIENT BUILDING DESIGN IN THE PNW

Drew Karson
Energy Consultant
Seattle, WA

In the Pacific Northwest, resilient design starts with a blunt reality: many buildings are well matched to the average day and poorly matched to the disruption day.

That gap shows up fast in this region. A winter storm knocks out power, and an all-electric building loses heat with it. Wind takes down distribution lines, and a facility that looked reliable on paper goes dark. Roads ice over, and the problem is no longer just the building system failure; it is the fact that repair crews, first responders, or occupants may not be able to move at all. In the built environment, resilience is less about dramatic catastrophe than about what happens when ordinary systems fail in a place that is only intermittently stressed but highly exposed when that stress arrives.

That is what makes the Pacific Northwest a distinct design challenge. The region often sits in a middle zone: hazards are serious enough to matter, but not frequent enough to make every owner eager to consider in the upfront cost of resilient design. The result is a built environment that can be surprisingly vulnerable precisely because the risks do not feel constant.

KEY RISKS IN THE PACIFIC NORTHWEST

For designers and owners, the most useful framework is not simply "what hazards exist?" It is "what hazards create the most building-level risk?" That means looking at both magnitude and frequency.

The high-magnitude risk in the Pacific Northwest is extreme cold and ice. These events may be infrequent, but they hit the built environment hard. Roadways become inaccessible. Power outages stretch longer because restoration is harder. And because Washington and Oregon rely so heavily on electric heating, a cold-weather blackout can shut off both electricity and space heating at once. In building terms, that is a cascading failure: power loss becomes a thermal comfort problem, then a safety problem, then an operational problem.

The more common risk is the wind-driven outage. In many Pacific Northwest communities, the grid's weakness is not generation so much as distribution. Overhead lines move through trees, hills, and constrained access routes. Outages may be shorter and less dramatic than an ice storm, but they happen often enough to shape design decisions for facilities that cannot afford repeated interruptions.

DECIDING WHAT A RESILIENT BUILDING ACTUALLY NEEDS

Not every building needs to do everything. The smartest resilience plans usually begin by identifying critical needs rather than trying to harden every system equally.

That is a much more useful question for the built environment: What needs to stay on for this building to remain functional? On a college campus, that may not mean every classroom stays fully operational. It may mean dorms remain habitable, dining stays online, and core communications work. Once those priorities are defined, resilience planning becomes more targeted. That is when decisions about envelope upgrades, HVAC filtration, backup power, or a full microgrid start to make sense in proportion to the actual mission of the facility.

This also helps explain why resilience looks different by sector. A government building may justify a highly redundant system because interruption is unacceptable. A school or civic portfolio may need something more selective. In either case, resilient design works best when it is tied to building function, not an abstract idea of "preparedness."

KEY SYSTEMS TO CONSIDER

In the Pacific Northwest, resilient building systems rarely come down to one silver bullet. The stronger strategy is usually layered.

One effective model is what could be called pragmatic resilience: use battery storage and PV to cover the vast majority of routine outages, then keep a smaller fossil-fuel generator for the true edge case. In that sequence, the battery and solar system handle the everyday disruption profile, while the generator is reserved for the black-swan event. That can dramatically reduce the size and cost of the battery system compared with designing for the single worst day.

That matters in this region because the economics of solar are not uniform. Seattle and Portland do not offer the same solar profile as California, while eastern Oregon and Washington can be much more favorable. But even where the solar margin is smaller, on-site energy can still provide building-level value during normal operations by offsetting electricity costs and acting as a hedge against a less reliable, more expensive grid.

SEATTLE, WASHINGTON

The more important point is that resilient systems should match the outage profile the building is actually likely to face. A design that covers 95 percent of disruptions, then uses a smaller backup layer for the last 5 percent, is often a better built-environment solution than one oversized system attempting cover all potentials at the same time.

What low-cost moves can make buildings more resilient?

Not every resilience investment is a major capital project. Some of the most useful moves are operational.

Temporary generators can be deployed strategically across a portfolio instead of purchasing permanent backup systems for every facility. Written emergency procedures can protect buildings almost as effectively as equipment in the first hours of a disruption: who shuts down what, who calls the utility, where occupants move, which spaces stay operational. Prearranged fuel agreements and utility partnerships can also reduce downtime dramatically because they replace improvisation with sequence.

That is especially important for public portfolios. A library system, municipal network, or campus may get more value from strengthening a small set of buildings into community resilience hubs than from trying to make every facility self-sufficient. In those cases, the building becomes part of a larger operational strategy: a place for heating, cooling, charging, and continuity when surrounding systems fail.

Why is resilient building design becoming more urgent now?

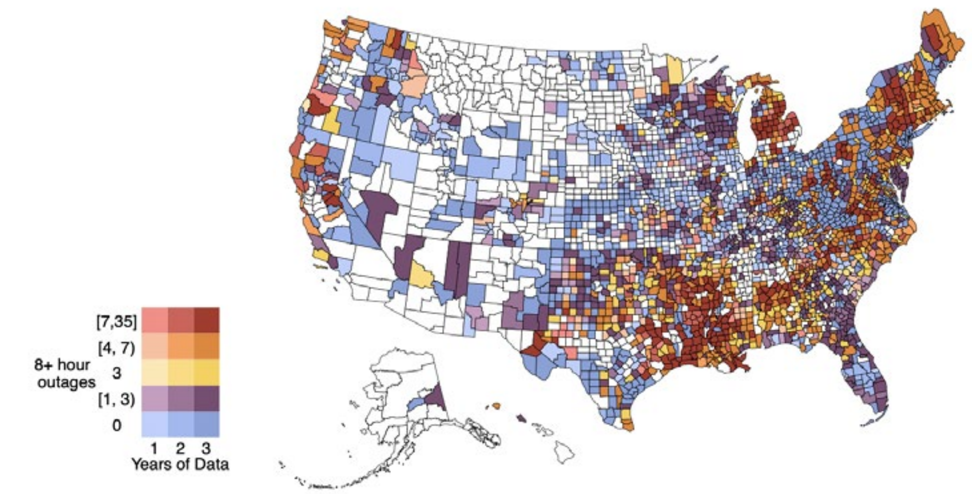
Because the building case is no longer only about emergencies. It is increasingly about economics.

Electricity prices are rising. Time-of-use pricing is spreading. Utilities are offering more grants and incentives for batteries and microgrids because reducing peak demand can be cheaper than building new generation. That means resilient building systems can now do double duty: save money during normal operation and provide backup during disruption.

At the same time, the region's future hazard profile is getting harder to model from historical averages alone. Weather is more volatile. Snowpack swings. Heat events and wildfire impacts are growing less predictable. For buildings, that means resilience cannot be based only on what used to happen. It has to be based on what future conditions are likely to demand from mechanical systems, electrical infrastructure, and operations planning.

In the Pacific Northwest, resilient design is not about turning every building into a fortress. It is about closing the gap between what a building is designed to do on a normal day and what it must keep doing when the day comes that the systems around it stop behaving normally.

Reach out to Drew Karson at **dkarson@glumac.com.**



Number of 8+ hour electrical outages in the USA. Numbers can be quite high in the Pacific Northwest, meaning passive design and electrification strategies, while vital to decarbonization, pose risk to resilience.

PORTLAND, OREGON

RESILIENCE IS BECOMING A PROJECT REQUIREMENT

SOUTHERN CALIFORNIA STATE OF THE MARKET

Simon Ubhi, PE
Southern Region Portfolio Lead
Los Angeles

Southern California projects are being shaped by a specific set of environmental pressures: extreme heat, wildfire smoke, drought, water reliability, grid instability, longer outages, and seismic risk. The primary takeaway from our Southern Region Portfolio Lead Simon Ubhi's state-of-the-market update is that resilience can't be treated as a generic add-on or a single-system solution. It must tied to a facility's risks, and coordinated across disciplines.

WE NEED TO SHIFT FROM ASKING, ‘WHAT BACKUP SYSTEM DO WE NEED?’ TO ASKING, **‘WHAT DOES THIS FACILITY NEED TO KEEP DOING DURING DISRUPTION?’**

HOW PROJECTS IN THIS REGION CAN APPROACH THESE CHALLENGES

Projects in Southern California should begin by naming the hazards they are actually designing for. The region’s challenges are not abstract: heat waves drive cooling demand, strain the grid, and create indoor health risks during outages. Wildfire and smoke events affect air quality, ventilation, filtration, and operational continuity. Drought and water reliability constraints create additional pressure, especially where fire response water is part of the resilience strategy. Grid reliability issues, including Public Safety Power Shutoffs and longer-duration outages challenge the idea that standby generation alone is enough. Seismic risk adds another layer, particularly for facilities that need to maintain critical services or restart quickly after an event.

Our approach is to bring resilience context into every applicable project and promote those considerations with stakeholders as early as possible. Ideally, that happens during scope development. But the key point is that it is never too late to raise resilience questions if they have been missed. The goal is not to make resilience a separate conversation. It is to make it part of the project’s basic definition of performance.

That means resilience should be understood as more than backup power. A generator may be part of the answer, but it does not address the full risk profile of Southern California projects. Resilience has to be multidisciplinary. It can include water storage for firefighting, HVAC strategies such as chilled water connections for temporary chillers, and other discipline-driven planning measures that help a facility remain safe, functional, or recoverable during a potential disruption.

In practical terms, Southern Region projects should:

- **Define the hazard set early.** Projects should identify which risks matter most: heat, smoke, outage, seismic, water, or a combination of these.
- **Identify critical functions and acceptable downtime.** Teams should clarify what the facility must continue to do during a disruption and how long it can tolerate reduced operation.
- **Build for passive survivability where possible.** Shade, envelope performance, and thermal comfort strategies all can help a building remain safer during an outage.
- **Plan for longer-duration outages with layered strategies.** This may include right-sized standby power, PV plus storage where feasible, load shedding, and prioritization of critical loads.
- **Address smoke season explicitly.** Filtration strategy, outdoor air controls, and operational modes for sheltering should be part of the design conversation.
- **Design MEP systems for recoverability, not just protection.** Clear restart sequences, accessible isolation, maintainable equipment layouts, and a spares strategy can help facilities recover faster.
- **Make resilience operational, not only capital.** Owner training, emergency operating modes, and clear triggers for switching modes are part of the resilience plan.

The practical shift is for our industry to move from asking, “What backup system do we need?” to asking, “What does this facility need to keep doing, what conditions could interrupt that, and how do we design across disciplines so it can respond?”

RESILIENCE IS NOT JUST BACKUP POWER

A GENERATOR CAN BE PART OF THE SOLUTION, BUT PROJECTS NEED BROADER, MULTIDISCIPLINARY RESILIENCE PLANNING.

THAT CAN INCLUDE:

- Water storage for firefighting
- Strategies such as chilled water connections for temporary chillers
- Filtration and outdoor air controls for smoke season
- Load shedding and prioritization of critical loads
- PV plus storage where feasible
- Clear restart sequences for MEP systems
- Accessible isolation and maintainable equipment layouts
- Owner training and emergency operating modes

WHAT ARE WE MISSING?

The common gap in adoption is the business case. Resilience often adds first cost, and project teams need clearer ways to explain why that investment matters. The financial argument cannot stop at the cost of the resilience measure itself. It also needs to account for the cost of consequences: what happens when a school, hospital, or campus community experiences downtime, disruption, or loss of critical services?

That question is central because resilience value is often clearest during an event. If the project team cannot define what downtime costs, it becomes harder to justify the upfront investment. For some owners, the consequence may be operational disruption. For others, it may be the loss of critical services, reduced safety, interrupted learning, or the inability to support a campus community during a regional emergency.

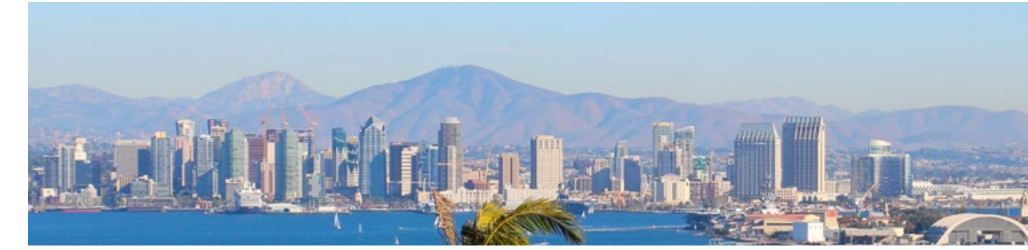
The missing piece is not only technical. It is financial and strategic:

- What does downtime truly cost?
- Which functions are most important to protect or restore?
- What level of resilience is appropriate for the owner's mission?
- How can the project team compare first cost against avoided consequences?

This is where resilience needs to be translated into owner-specific value. A school, hospital, or campus may each understand downtime differently. **The business case has to reflect that difference.**

THE SOUTHERN CALIFORNIA HAZARD MATRIX

Hazard	BUILDING IMPACT	DESIGN RESPONSE
Extreme Heat	Cooling demand, grid strain, indoor health risks	Shade, envelope, passive survivability, thermal comfort strategy
Wildfire Smoke	Air quality, ventilation, continuity issues	Filtration strategy, outdoor air controls, sheltering modes
Drought	Water reliability, fire response needs	Water storage, fire response planning
Grid Instability	Longer downtime, limits of generator-only thinking	Standby power, PV + storage, load shedding, critical load prioritization
Seismic Risk	Critical service disruption, restart needs	Recoverability, restart sequences, accessible isolation, spares strategy



WHAT'S WORKING & WHERE ARE THE CHALLENGES?

There are several positive forces in the Southern California market.

First, owners and districts have recent lived experience with the risks. Heat, smoke, and outages are no longer distant scenarios. Because many stakeholders have experienced these disruptions directly, resilience conversations land faster than they used to. The market does not need as much convincing that these hazards matter.

Second, electrification and decarbonization work is accelerating. That creates an opening for resilience upgrades because systems are already being evaluated, modernized, or replaced. When projects are changing how buildings use energy, support loads, or plan for future operations, resilience can be integrated into that work rather than treated as a separate effort.

Third, many clients are becoming more open to campus-wide thinking. Instead of looking only at individual buildings, owners are considering central plants, distribution, and microgrid readiness. That broader view is important because many resilience strategies work better at a campus scale, where teams can think about shared infrastructure, critical loads, and long-term flexibility.

The tailwinds in the region include:

- Recent lived experience with heat, smoke, and outages. Owners and districts understand the risks more directly than they did before.
- Momentum around electrification and decarbonization. Modernization projects can create opportunities to incorporate resilience improvements.
- Increased openness to campus-wide planning. Clients are more willing to consider central plants, distribution strategies, and microgrid readiness rather than staying in single-building silos.

Taken together, these forces are changing the resilience conversation. Southern California projects are being pushed by real hazards, but they are also benefiting from owners who better understand the risks, systems that are already being modernized, and a growing willingness to think beyond one building at a time.

That is the state of the market: resilience is becoming more practical, more multidisciplinary, and more closely tied to how buildings actually need to operate in Southern California.

Reach out to Simon Ubhi at **subhi@glumac.com**.

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SUSTAINABILITY **MATTERS**

Summer // 2026

Resilience

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