



New Solar Energy Requirements for Residential Construction and the Transition to Energy Independence

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California is radically changing the home-building industry. Beginning on January 1, 2020, new homes and low-rise (three stories or less) residential buildings in California must install solar power systems on the building site, or provide solar power as part of a community-shared, solar-electric-generation system. The solar energy requirements are intended to reduce the amount of fossil-fuel-produced energy consumed by homes and are an incremental step toward California's long-term goal of zero net energy ("ZNE") buildings. A ZNE building is "an energy efficient building where, on a source energy basis, the actual annual consumed energy is less than or equal to the on-site renewable generated energy."¹ California's new solar energy requirements and zero energy goals should provide homeowners and renters with lower monthly housing costs, compel residential developers to improve the energy efficiency of their buildings, significantly decrease the cost of solar installations, and accelerate the modernization of residential building design and construction.² This modernization could spark a transformation in home-building and energy consumption well beyond California's borders.

I. DEVELOPMENT OF SOLAR ENERGY—*THE SPARK FOR ENERGY INDEPENDENCE*

Over the past five years, solar panel efficiency has increased, while the cost of the panels has continued to decrease. The City

of Los Angeles recently signed a power purchase agreement to purchase utility scale solar power at a fixed cost of two cents per kilowatt-hour, the lowest price offered in United States history.³ More recently, the City signed a combined solar power purchase and energy storage agreement with power priced at 3.3 cents per kilowatt-hour, a record low for this type of contract, and cheaper than electricity generated from natural gas.⁴ At this price, the cost of utility-scale-generated solar power⁵ is now less than that for coal or natural-gas-generated electrical power.⁶ Considering these efficiency and cost trends in solar power, and the impact of fossil fuel pollution, the continuing transition to renewable energy will accelerate due to economic advantages, environmental concerns, and regulatory mandates.

Notwithstanding the increased efficiency of buildings and other conservation measures, our reliance on electricity to power household appliances will likely remain high for the foreseeable future. To achieve their environmental goals, more than 20 California cities have adopted, and more than 50 cities are considering, building ordinances or "reach codes" to encourage elimination or replacement of natural gas-powered equipment and appliances with electric.⁷ Moreover, the market for electric vehicles is expected to grow due to the lower operating costs and superior performance of electric over internal combustion motors.⁸ As nuclear-power-generated and natural-gas-generated electricity are eliminated from buildings in California, the demand for renewable power has increased dramatically.⁹ This shift has spurred, and will continue to spur, investment in solar energy and, ultimately, continue decreasing the cost of renewable energy due to economies of scale.

The installation of solar energy systems will free many new homes from total dependence upon utility companies. This independence from utility-supplied power could unleash market innovations that are as-yet unimagined. Sunlight is an unlimited resource and is the natural source of most energy.¹⁰ Advances in solar technology and competition in the energy marketplace could enable millions of people to live more

economically, independently, and without the expense and pollution associated with fossil-fuel-generated energy.¹¹

II. BACKGROUND OF CALIFORNIA'S ENERGY PLANS—DRIVING THE ENERGY MARKET TRANSFORMATION

More than a decade ago, Governor Arnold Schwarzenegger signed into law the Global Warming Solutions Act of 2006 (“AB 32”). Pursuant to AB 32, a Climate Change Scoping Plan required the State of California to reduce greenhouse gas emissions to 1990 levels by 2020. AB 32 directed the California Air Resources Board to identify actions that would reduce emissions while also preparing a scoping plan to identify the best methods to reach the 2020 limit.

In 2007, the California Building Standards Commission began developing green building standards to meet the goals of AB 32. The 2008 California Green Building Standards Code (“GBSC”) was the first green building code in the nation. The initial GBSC provided a framework for, and first step towards, establishing green building standards for low-rise residential structures. The GBSC was used as a base document that led to the 2010 CALGreen Code (“CALGreen”).¹² CALGreen was the first-in-the-nation green building standards code that established new energy efficiency minimums for buildings.¹³ However, regulation of energy efficiency is left to the California Energy Commission (“CEC”) and the California Energy Code, known as the Building Energy Efficiency Standards.¹⁴

In July 2008, the California Public Utilities Commission (“CPUC”) established new energy saving targets for the years 2012 through 2020 for its regulated utilities. These goals are intended to spur “long-lasting sustainable changes” in the energy market. In September 2008, the CPUC adopted the Long Term Energy Efficiency Strategic Plan (“Strategic Plan”) to achieve maximum energy efficiency across California.

The Strategic Plan has been supplemented by the CEC’s more specific regulations in its Building Energy Efficiency Standards. The Building Energy Efficiency Standards were critical to implementing both the Strategic Plan and the CPUC’s Residential Zero Net Energy Action Plan (“Action Plan”) that followed. The Action Plan was designed to operationalize the Strategic Plan’s goal of ZNE buildings in all new residential construction.¹⁵

In 2016, California enacted Senate Bill 32, which requires a reduction in greenhouse gas emissions to levels 40% below the 1990 levels by 2030. In 2018, the state enacted Senate Bill 1477, which provides incentives for near-zero emission homes, and Assembly Bill 3232, which requires the state to

assess the options to reduce emissions from buildings by 40% from 1990 levels by 2030.¹⁶ In 2018, Senate Bill 100 established a landmark policy requiring renewable energy and zero-carbon resources to supply 100% of electric retail sales to end-use customers by 2045, and requiring state agencies to ensure that actions are taken to achieve this policy.¹⁷

The Building Energy Efficiency Standards are a key component to achieving California’s evolving environmental policies, and are updated every three years.¹⁸ The 2019 Building Energy Efficiency Standards update (“2019 Standards”) added several significant requirements to the 2016 standards, although the 2019 Standards did not adopt a ZNE mandate. The 2019 standards require that all low-rise, single-family, and multifamily buildings either have a photovoltaic (“PV”) system installed on the building site or be part of a “community shared solar electric generation system” approved by the CEC.¹⁹ The mandate for new solar-energized homes, starting in 2020, contains a temporary exemption for replacing a residential building damaged or destroyed by a disaster in an area where the government has proclaimed a state of emergency and the reconstruction project meets certain additional conditions.²⁰

III. SOLAR ENERGY REQUIREMENTS—A MANDATE FOR SELF-RELIANCE

Pursuant to the 2019 Standards, a photovoltaic system must be installed on all new single family residences and low-rise apartments, unless a building is subject to an exception.²¹ This requirement applies as a condition to issuance of building permits for low-rise residential buildings after January 1, 2020.²² Under the 2019 Standards, builders must install solar power systems on individual homes or apartment projects, or, under an exemption, build a shared solar power system, join an approved, community-shared, solar-electric generation system or other renewable electric generation system, and/or join a community-shared battery storage system. This exemption is available as an alternative to homes and apartments built in a common-use development with a CEC-approved community power source. In February 2020, the CEC approved the Sacramento Municipal Utility District’s proposal to permit certain housing developments to use off-site solar power plants to meet the solar mandate under the community-shared solar electric generation system exemption.²³

The 2019 Standards also include new energy efficiency requirements, which will be essential in meeting homeowner expectations and performance standards for solar-energized buildings. Two approaches in the 2019 Standards may be employed to meet the low-rise residential energy budgets: the prescriptive approach and the performance approach.²⁴

Although less flexible than the performance approach, the prescriptive approach is simpler than the performance approach and requires that each energy component in the home meet a prescribed minimum efficiency level.²⁵ The more complicated performance approach offers more design flexibility, utilizing approved software to calculate the energy consumption of a proposed building design and comparing the energy consumption to a calculated energy budget mandated by the Public Resources Code.²⁶ The performance approach also gives compliance credits for builders who incorporate extra compliance options into their buildings, such as battery storage or solar-thermal water-heating systems.²⁷

Solar systems must be sized to offset 100% of the home's electricity, although homes can still use energy from other sources. Each property is assigned an energy budget based on its square footage, and the regulations are tailored to mixed-fuel homes. The size of the solar array can be reduced if other energy efficiency improvements are made elsewhere, like the inclusion of energy storage. For instance, builders who install energy storage systems may reduce the size of the home's PV array.

These new solar energy requirements present huge challenges and opportunities. In one year, California could start construction on at least 50,000 to 100,000 new solar-energized homes and apartments.²⁸ Further, more than a million new homes are built in the U.S. every year.²⁹ Solar requirements for new homes could spark major changes in the design, construction, and performance of new residential buildings in California, and with time, across the U.S.

IV. HOMEBUYERS AND RENTERS—A FREER ENERGY MARKET AND THE END OF ENERGY MONOPOLIES

Although California is the first state to adopt a solar requirement for residential construction, a majority of Americans support new home solar mandates according to a recent, industry-supported poll.³⁰ As other states consider the mandate, opponents argue that the solar energy mandate will make affordable housing even more costly.³¹ According to the CEC, the 2019 Standards will increase the average cost of building a home by approximately \$8,400.³² Battery storage would add even more costs. Proponents counter that higher mortgage payments due to increased construction costs reflected in home prices are offset by the homeowner's reduced utility costs. In other words, when homeowners invest in a solar-energized home, they receive a payback through reduced utility costs.³³ If solar energy mandates do increase the initial purchase price of a home, most of that increase would be amortized over the mortgage term.³⁴

Solar-energized homes with battery storage have the added benefit of further reducing homeowners' and renters' dependence on utility-supplier power. Battery storage systems store PV-generated electricity in the middle of the day, when solar resources are generally plentiful and electricity prices are low. The battery storage system discharges the stored electricity later in the day during peak energy-use hours when solar resources are diminished; at night, for example, or during temporary power interruptions.³⁵ Without the energy stored in their battery systems, these homes would need to obtain power from the public-utility-powered electrical grid at night.³⁶

Utility-supplied power is subject to temporary interruptions, among other issues. After a decade of record-high temperatures, California's wildfire season is now nearly year-round. Utility companies in California shut off power to thousands of customers during periods of high, dry winds to prevent fires in recent years.³⁷ Solar power with battery storage can mitigate a home's losses from utility-instigated power shut-downs through temporary shutdown of refrigeration, and security, fire alarm, life-support, and other critical systems. Therefore, solar-energized buildings with battery storage may not only reduce utility costs, but can equip homes with additional energy reliability and resiliency.

V. BUILDING DESIGN—INTEGRATION, MODELING, AND COLLABORATION

High performance buildings differ in several key respects from traditional buildings: (1) they have on-site or near-site energy production; (2) they employ advanced energy-management systems; and (3) they must comply with specific energy performance standards. Builders are held accountable for meeting these requirements by homeowners and apartment renters, who can evaluate the energy efficiency of solar-energized buildings through utility bills and computer programs. Therefore, developers and builders should be careful not to overstate their buildings' estimated energy efficiency, energy production, or cost savings when marketing homes, apartments, or solar energy systems. Residential builders need to consider the potential liability associated with misrepresentations, inadequate disclosures, and the failure of their buildings to meet California's energy efficiency and power-generation performance standards.

Solar energy requirements and zero energy goals in new homes and apartment buildings could significantly improve building systems. Builders traditionally met Title 24 requirements through a combination of high-efficiency HVAC, building insulation, insulated glazing units, and air-tight building envelopes. Builders often designed these systems after they completed the schematic design. To maximize building

performance, however, energy efficiency and power production should be considered early in the design process, and must include an analysis of the building's solar orientation, building envelope's energy efficiency, passive heating and cooling systems, use of daylight, roof and shading systems, solar tracking systems, and other high-efficiency components, appliances, and systems. High-performance buildings often have attributes that include sustainability, functionality, resiliency, cost effectiveness, occupant productivity, safety, health, and security. Pre-construction, these buildings typically require computer modeling, and coordination among various engineering, architectural, and construction specialties throughout the design and construction process. To minimize energy consumption and maximize energy production, high-performance buildings must be properly commissioned, operated, monitored, and maintained.

Solar power systems can be integrated into a new home's design, free from the constraints that an existing building imposes when a homeowner installs solar energy systems. Integrated solar design facilitates improved solar energy systems aesthetics, efficiency, and functionality through the building's configuration and its exposure to sunlight. For instance, a roof on a new home can be designed to better accommodate the exposure of a solar system to the sun, and to better protect solar panels from damage due to storms. Solar receptors can be integrated into roofing materials and other exterior surfaces as well.

The mandate for solar power systems in new homes could dramatically decrease the cost of residential solar systems by eliminating many "soft costs" that account for over half of the cost of solar installations on existing homes.³⁸ In comparison to a retrofit project, a solar installation on a new home designed for a solar energy system is far simpler and efficient, resulting in lower material, labor, equipment, and overhead costs.³⁹

By optimizing building performance (energy efficiency, production, storage, and management), a solar home can nearly achieve energy independence, and potentially become a "regenerative" asset.⁴⁰ With "smart" building controls, battery storage, and energy management systems, a solar-energized home could provide enough power to charge electric vehicles, electric appliances, and cordless power tools.⁴¹ As the efficiency of solar panels continues to increase, solar homes may produce enough energy to filter air, water, and waste as well.⁴²

As smart, high-performance buildings begin to incorporate energy-generating, pollution-absorbing, biophilic, and regenerative designs, the beneficial characteristics of sustainable design will alter the perception that buildings are inert static structures. The functional elements of high performance

buildings will contribute to the economic well-being of the occupants and health of the surrounding environment. Through sustainable design, "we shape our buildings," and thereafter they *sustain* us.⁴³

VI. HOME BUILDING INDUSTRY—CHANGE CREATES OPPORTUNITY

Affordability and an unmet demand for housing currently challenge the home building industry. However, solar energy requirements need not increase construction cost or time, which can be significantly reduced by modernizing design and construction. The building industry is modernizing its processes through building information modeling ("BIM"), prefabrication, robotics, 3D printing, and alternative project delivery systems. California's mandate for high-performance homes and apartment buildings will likely accelerate these trends.

Prefabrication and modular construction may present the greatest opportunity for high-performance, multi-family residential projects, although prefabrication has advantages for single-family homes as well. These advantages include the potential for technological innovation, faster project delivery, lower labor costs, reduced material waste, improved worker safety, higher and consistent quality, reduced transportation and embedded emissions, and better energy performance.⁴⁴

The potential of prefabrication and modular design to jump-start construction's stalled productivity is huge. Unlike most industries, the construction industry has not significantly increased productivity in 50 years.⁴⁵ For generations, traditional homes and apartments have been constructed inefficiently by teams of inconsistently trained workers who have rarely previously worked together, using custom designs, at outdoor sites with unique building and staging constraints, with variable weather.⁴⁶ Due to these variables, rework claims and cost overruns are far too common on site-built homes and apartments. It is no surprise that construction notoriously costs much more and takes far longer than anyone predicts. By implementing more prefabrication and modular construction, the industry will be able attract and retain a superior work force, better utilize robotic equipment, and improve processes to better fabricate components and systems for high-performance buildings.

VII. MANAGING RISK—MEETING PERFORMANCE STANDARDS

California's new building standards will require the homebuilding industry to manage risks inherent in the design, procurement, installation, and maintenance of high-

performance components and solar power systems. With the adoption of solar energy requirements, energy performance and functionality standards should be a major concern of the home building industry. Failing to meet home performance standards could result in builder liability. Under California's Right to Repair Act, homeowners may sue builders for damages when new homes do not meet the construction or functionality standards in the Act.⁴⁷

Specifically, the Right to Repair Act provides, in part:

In any action seeking recovery of damages arising out of, or related to deficiencies in, the residential construction, design, specifications, surveying, planning, supervision, testing, or observation of construction, a builder, and to the extent set forth in Chapter 4 (commencing with Section 910), a general contractor, subcontractor, material supplier, individual product manufacturer, or design professional, shall, except as specifically set forth in this title, be liable for, and the claimant's claims or causes of action shall be limited to violation of, the following standards, except as specifically set forth in this title. This title applies to original construction intended to be sold as an individual dwelling unit.⁴⁸

Although the Right to Repair Act does not specifically reference solar energy performance standards, Civil Code section 896(f) provides: "Electrical systems shall operate properly and shall not materially impair the use of the structure by its inhabitants. However, no action shall be brought pursuant to this subdivision more than four years from close of escrow." A subsequent section of the Right to Repair Act, Civil Code section 896(g)(3), provides that manufactured products "shall be installed so as not to interfere with the products' useful life, if any." A "manufactured product" means a product that is completely manufactured offsite. If a manufactured product is damaged as a result of a violation of the standards, damage to the product is a recoverable element of damages. "Useful life" means a representation of how long a product is warranted. This subparagraph does not limit recovery if another building component has been damaged by a manufactured product during the manufactured product's useful life.⁴⁹

Further, Civil Code section 897 clarifies that the functionality standards are intended to address every function and component of a home. It specifically provides that "to the extent that a function or component of a residential home is not addressed by these standards, it shall be actionable if it causes damage." As defined by the Right to Repair Act, a claim for damages includes, among other things, "the reasonable cost of repairing and rectifying any damages resulting from the failure of the

home to meet the standards." Accordingly, homeowners may have a cause of action against the builder when new homes fail to meet the building performance standards if that failure results in damage. The failure may trigger potential claims for misrepresentation, breach of warranty, and other common law causes of action as well.

California imposes disclosure requirements on the sale of solar energy systems for existing homes, and for homes where a solar energy system is not a "standard feature on new construction."⁵⁰ Effective January 1, 2019, a solar energy system company must "prior to completion of a sale, financing, or lease of a solar energy system," provide a consumer with a solar energy system disclosure document or documents that "provide a consumer, at a minimum, accurate, clear, and concise information regarding the installation of a solar energy system, total costs of installation, anticipated savings, the assumptions and inputs used to estimate the savings, and the implications of various financing options."⁵¹ Detailed disclosure forms are available online at the Contractors State License Board website.⁵² Although the requirement for this disclosure document does not apply to a solar energy system that is installed as a "standard feature" on new construction, a builder might be obligated to provide the disclosure document for the construction or sale of a custom home.

VIII. PROTECTING SOLAR RIGHTS—*AVOIDING DISPUTES WITH NEIGHBORS*

An important consideration when installing a solar energy system is future access to unobstructed sunlight. The best way to ensure permanent access to sunlight is through a solar easement that restricts what a neighbor may build or grow on its land if the structure or growth would block the sunlight to the solar panels.⁵³ A solar easement should be written and recorded to place a future owner on notice of the easement.⁵⁴ The easement should also, at a minimum, describe the dimensions of the easement in measurable terms, the specific restrictions, and the terms and conditions under which the easement may be revised or terminated.⁵⁵ Title insurance coverage can be purchased for certain types of solar projects, easements, and leasehold interests.⁵⁶

In 1978, California enacted the Solar Rights Act to protect solar installations and limit unreasonable restrictions on their use.⁵⁷ Among the most significant protections, the Solar Rights Act prohibits covenants, conditions, and restrictions from unreasonably restricting the use or installation of solar energy systems, limits the ability of local governments to unreasonably regulate the use of solar energy systems, and allows cities and counties to require dedications to solar easements as a condition of tentative map approval.

California also enacted a Solar Shade Control Act. To benefit from the Act, a solar energy system must fall within the definition of “solar collector,” which is “a fixed device, structure, or part of a device or structure, on the roof of a building, that is used primarily to transform solar energy into thermal, chemical, or electrical energy.”⁵⁸ A system installed on the ground can also qualify if it could not be installed on the roof due to inappropriate roofing material, slope of the roof, structural shading, or orientation of the building.⁵⁹ After installing a solar collector, a neighbor may not allow a tree or shrub to shade more than ten percent of the collector at any one time between the hours of 10:00 a.m. and 2:00 p.m.⁶⁰ This restriction only applies to trees and shrubs planted *after* the system was installed.⁶¹ A tree or shrub maintained in violation of the Act constitutes a private nuisance if the neighbor fails to remove or alter the tree or shrub after receiving written notice from the owner of the solar collector.⁶² A tree or shrub planted before a solar collection system is installed, is exempt from violation.⁶³ Other exemptions include the following: a tree planted on timberland or on land devoted to the production of commercial agricultural crops; a tree or shrub planted to replace one that grew before the installation of a solar collector; and a tree or shrub that is subject to a city or county ordinance.⁶⁴ Finally, a city or county may adopt an ordinance that exempts its jurisdiction from the provisions of the Act.⁶⁵

IX. INSURING SOLAR-ENERGIZED PROJECTS— AVOIDING GAPS IN INSURANCE COVERAGE

More than a decade ago, the insurance industry severely restricted commercial general liability (“CGL”) insurance for homebuilders and their contractors as a result of construction defect lawsuits. Consequently, insurance programs for residential construction have changed. Instead of owners, contractors, and subcontractors each buying separate insurance policies to cover their operations on a construction project, most major residential projects are currently insured through project-specific wrap-up insurance programs. A wrap-up program typically provides CGL insurance with extended completed-operations coverage for all contractors and subcontractors working on-site, but typically excludes coverage for off-site work, professional liability, and product liability.⁶⁶ Builders can modify, and sometimes eliminate, these exclusions by paying additional premiums.

Considering the significant liabilities and risks of loss, properly insuring residential building design and construction is critically important and should not be left to the average insurance broker or agent. In addition to CGL, builders risk, professional liability, and pollution coverage, high performance building projects may require additional types of insurance

coverage and financial guaranties.⁶⁷ For instance, the insurance industry has developed liability and property forms for utility-scale solar projects, as well as special endorsements to cover losses relating to “green building” and the additional costs of LEED certification.

Photovoltaic equipment and solar installations create liability and financial risk that can be difficult to insure.⁶⁸ Product liability and CGL insurance policies attempt to exclude coverage for economic loss due to defective products. Insurers argue that they do not insure economic losses where coverage requires “property damage” or physical damage to tangible property or damage resulting in loss of use. Depending upon the loss type, insurers might also assert the following coverage defenses:

1. CGL insurance covers only an “occurrence” or accident, and the performance claims involved with solar panels are reasonably foreseeable;
2. deterioration of the insured’s products does not satisfy the “property damage” requirement of CGL insurance;
3. exclusions for liability that is “contractually assumed” precludes coverage for breach of contract and breach of warranty claims;
4. defective product exclusions bar coverage for property damage to the insured’s own products;
5. “your work” exclusions bar coverage for property damage to a contractor’s own work;
6. impaired property exclusions preclude coverage for property damage that arises from a “defect, deficiency, [or] inadequacy . . . in ‘your product’ or ‘your work’”; and
7. product recall exclusions preclude coverage for withdrawing products that have not yet failed, but that are being withdrawn from use because of a known or suspected defect that may cause them to fail in the future.⁶⁹

Although policyholders may have counter-arguments that apply depending upon the circumstances of each claim, builders and property owners should consider procuring property, liability, and title insurance policies with broad form coverage to specifically address the risk associated with solar equipment and high-performance buildings.

In addition to, and in conjunction with, insurance programs, developers, contractors, and subcontractors will also attempt to contractually allocate to others the risk of energy performance standards through indemnification provisions, extended

warranty programs, and joint venture agreements. Due to statutory limitations on indemnification in construction contracts, agreements for design, procurement, and construction of high-performance housing should be drafted by experienced and knowledgeable counsel.

Partnerships, joint ventures, and performance guarantees between builders and solar installation companies often mitigate the risk of the long-term exposure for solar panel performance by allocating risks to the party in the best position to prevent a loss. These contractual risk-shifting mechanisms will often necessitate the financial backing of a surety or insurer through performance bonds, subcontractor default insurance, or guaranties.

X. CLAIMS AVOIDANCE—LIABILITY FOR BUILDING PERFORMANCE

The potential savings and benefits of solar energy and the general energy efficiency of solar homes will be touted by developers and homebuilders to differentiate their new residences from resale homes and older apartments. As energy-management systems enable homeowners and renters to measure and verify energy efficiency and building performance, it will not be difficult to hold builders accountable for substandard performance of and misrepresentations about their buildings. As in any real estate transaction, representations and warranties in home sale purchase contracts need to be carefully drafted, limited, and qualified. Homebuilders' attorneys should carefully identify the parties who provided extended product warranties, expressly limit the builder's responsibilities for items with manufacturers' warranties, and require new owners to properly maintain all building systems and components that are subject to long-term warranties.

Although most residential solar energy systems are not difficult to maintain, panels need to be cleaned, trees trimmed, wiring inspected, storm damage repaired, and electrical components periodically replaced. Operation and maintenance manuals are often ignored by homeowners after purchasing a home. A lack of maintenance can decrease system performance and lead to liability claims against builders and equipment manufacturers. Furthermore, solar-energized homes have long-term performance risks that require special attention. The statute of repose for latent defects in buildings is ten years, but manufacturers frequently warrant solar panels for more than twenty years.

Course-of-construction quality assurance, post-completion customer service, and maintenance service programs often provide the best means of avoiding energy-performance-related

claims. These programs are essential components of any risk management plan. When homeowners and renters assert claims related to building performance, contracts should permit, and the law typically affords, residential builders an opportunity to inspect and repair their mistakes. As discussed in Section VII, California's Right to Repair Act establishes a mandatory, pre-litigation procedure for addressing homeowner claims of defective construction in new residences.⁷⁰ The Act's pre-litigation procedure defines "builders" to include developers, general contractors, contractors, or any seller in the business of selling residential units.⁷¹ Under the Act, a builder may compel homeowners to comply with the pre-litigation requirements, which include the builder's right to inspect and repair the alleged defect.⁷² The intent of the Act is to allow the parties to resolve claims without litigation.

In common interest developments, the Davis-Stirling Act contains pre-litigation procedures that may apply to homeowner association claims against builders.⁷³ The pre-litigation procedures outlined in the Davis-Stirling Act also are intended to encourage repairs and discourage litigation.⁷⁴ These procedures are often referred to as the *Calderon* process.⁷⁵

Although many attorneys consider pre-litigation procedures useless impediments to lawsuits (which may be required to trigger a builder's liability insurance coverage), the Right to Repair Act, Davis-Stirling Act, and alternative dispute resolution ("ADR") procedures generally can effectively prevent litigation over building performance. Many homeowners and builders sincerely want problems promptly repaired without litigation. For those builders who have invested in quality assurance and customer satisfaction programs, pre-litigation procedures can be extremely valuable in resolving building performance issues without litigation.

XI. ALTERNATIVE DISPUTE RESOLUTION—AVOIDING LITIGATION

In place of litigation, homebuilders often prefer mandatory, non-binding mediation followed by binding arbitration. Developers typically include binding arbitration provisions in purchase and sale agreements, covenants, conditions and restrictions, and governing documents for homeowners associations. If developers include arbitration provisions in these documents, then developers should include similar arbitration provisions in their contracts with parties involved in the project's design, construction, sale, and operation. This consistency will ensure that the necessary parties and their insurance carriers can be joined in the same forum. Counsel must take great care to properly specify a selected ADR procedure, and to carefully

draft compatible joinder, indemnity, and insurance provisions in design, construction, and maintenance contracts.

Binding arbitration provisions are generally enforceable unless the contract is one of adhesion, conflicts with an ordinary person's reasonable expectations, is unconscionable, or is prohibited by statute. Under California law, an arbitration agreement in a contract to convey real property "shall not preclude or limit any right of action to which [Code of Civil Procedure] Section 337.1 or 337.15 is applicable."⁷⁶ These code sections relate to a home purchaser's right to sue for patent and latent defects in real property. Therefore, a home purchaser may pursue a construction defect claim in court even if an agreement conveying the real property contains an arbitration clause.⁷⁷

Because Code of Civil Procedure section 1298.7 and California court decisions have precluded builders from requiring home purchasers to arbitrate construction defect claims, some home builders have included arbitration provisions in their agreements that are subject to the Federal Arbitration Act ("FAA") in an attempt to preempt conflicting state laws.⁷⁸ The FAA applies when the written provision of a contract evidences a transaction involving interstate commerce.⁷⁹ Case law defines "involving commerce" as the functional equivalent of the term "affecting commerce," which generally signifies the broadest permissible exercise of Congress' commerce clause power.⁸⁰

The California Supreme Court held in *Pinnacle Museum Tower Association v. Pinnacle Market Development*, that binding arbitration clauses within covenants, conditions, and restrictions are enforceable.⁸¹ The Court recognized that both the Davis-Stirling Act and the Department of Real Estate regulations do not prohibit the use of binding arbitration clauses within covenants, conditions, and restrictions.⁸² Therefore, developers still possess a means to utilize binding arbitration instead of litigation.

XII. CONCLUSION—THE EVOLUTION OF HOUSING AND ENERGY PRODUCTION

As Buckminster Fuller said, "[n]ature is trying very hard to make us succeed, but nature does not depend on us. We are not the only experiment."⁸³ In mandating solar power on all new homes, California is attempting to use the near infinite power of natural sunlight to improve our environment. The public and homeowners can benefit economically from solar energy production through lower energy costs, and potentially can be freed from power interruptions. Furthermore, California's new solar building requirements will keep California at the forefront of the world's transition to fossil-fuel-free electrical power generation. Solar energy and the transition to energy

independence will no doubt create new challenges and opportunities, and in the process, will make buildings more productive, resilient, and sustainable.

Endnotes

- * The author's contact information is: (310) 734-3311; tsetnet@gibbsgiden.com.
- 1 Cal. Pub. Utils. Comm., Zero Net Energy, <https://www.cpuc.ca.gov/ZNE/>.
- 2 John Weaver, *California Residential Solar Power Headed Toward \$1/W and 2.5¢/kWh*, PV Mag., May 14, 2018, <https://pv-magazine-usa.com/2018/05/14/california-residential-solar-power-headed-to-1-12-w-2-5¢-kwh/>.
- 3 Betsy Lillian, *L.A. Moves Forward on 'Historically Low-Cost' Solar and Storage Center*, Solar Industry, Sept. 12, 2019, <https://solarindustrymag.com/l-a-moves-forward-on-historically-low-cost-solar-and-storage-center>.
- 4 Sammy Roth, *Los Angeles OKs a Deal for Record-Cheap Solar Power and Battery Storage*, L.A. Times, Sept. 10, 2019, <https://www.latimes.com/environment/story/2019-09-10/ladwp-votes-on-eland-solar-contract>.
- 5 A utility-scale solar power generation facility produces at least 500 megawatts ("MW") of electrical power.
- 6 Known as "Swanson's Law," since the mid-1970s, solar panels have gone down about 20% in price every time the volume shipped doubles annually. Put more simply, solar panels are at least three times cheaper than they were just a decade ago. Weaver, *supra* note 2.
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