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Author

Hoffman,, Peter C.

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Mandating Solar Hot Water By California Local Governments: Legal Issues

Peter C. Hoffman*

I. INTRODUCTION

Local governments, to respond to pressures generated by the current scarcity and expense of traditional energy supplies, are increasingly forced to address questions of energy supply and demand with which they have not historically been concerned. A frequently discussed strategy for conserving fossil fuel supplies is to increase the use of solar energy. One method local governments may employ to promote the use of solar energy is to mandate the installation of solar domestic hot water systems in all new residential construction. This article addresses the legality of solar mandates in California cities and counties. It can hopefully serve as a primer for decision makers and others interested in techniques for promoting the increased use of solar energy.

Several factors explain the decision to limit the scope of this article to local government mandates of solar domestic hot water systems in new residential construction. First, the choice to consider only local government activity was dictated by the simple fact that while state and federal incentives do exist in the form of tax credits¹ and technical assistance,² the mandate efforts now in

^{*} This article was authored by Peter Hoffman, UCLA School of Law, Class of 1981, with the assistance of the editors and staff of the JELP.

^{1.} Federal income tax credits for expenditures to save energy are available in two categories. For energy conservation expenditures, the credit is fifteen percent of all conservation expenditures up to a total expenditure of \$2000. 26 U.S.C. § 44C(b)(1) (Supp. 1979). For expenditures for systems using renewable energy sources, the credit is forty percent of the first \$10,000. *Id.* § 44C(b)(2). These credits can only be claimed by homeowners for improvements on their principal dwellings.

California allows a fifty-five percent credit (up to a total credit of \$3000) against a taxpayer's California income tax for expenditures made in acquiring a solar energy system (including installation charges and expenses incurred in acquiring an access

progress are being made by local governments.3 Second, solar do-

easement). Cal. Rev. & Tax Code §§ 17052.5, 23601(a)(2) (West 1979) (extended by legislation, see 1980 Cal. Legis. Serv. ch. 903). In addition to the expenses of acquiring the solar system, the cost of conservation measures undertaken to reduce the cost of a back-up supply system can be included in the expenditure total (fifty-five percent of which can be credited against California income tax liability). Id. §§ 17052.5(a)(5), 23601(a)(5). See also 20 Cal. Ad. Code § 2603(c) (1980).

If both a federal credit and a state credit are claimed, the state credit must be reduced by the amount of the federal credit so that the maximum combined credit for an individual does not exceed fifty-five percent of the total expenditure. 1980 Cal. Legis. Serv. ch. 903, amending Cal. Rev. & Tax Code §§ 23601(e), 17052.5(h). However, since the developers cannot claim the federal credit, but can take the state credit, a ninety-five percent effective credit can be obtained if the builder claims the fifty-five percent state credit and allows the homebuyer to take the forty percent federal credit. The builder will not be required to deduct the federal credit since he did not claim it. Thus, a total of ninety-five percent of the cost of the system can be deducted from tax liability. See 85% Solar Tax Credit, SUNUP; ENERGY NEWS DIG., Dec. 1979, at 1, written before the federal credit was raised from thirty to forty percent.

- 2. Cal. Pub. Res. Code § 25216 (West Supp. 1980) directs the State Energy Resources Conservation and Development Commission (CEC) to carry out measures to advance the research and development of alternative energy sources. The Commission is also directed to submit recommendations for energy conservation to the Public Utilities Commission (PUC). Id. § 25403. The PUC has recently moved to promote solar energy (as well as other energy efficiency measures) by directing major, privately owned utilities in California to undertake demonstration projects for encouraging solar hot water use. California Public Utilities Comm'n, Feasibility of Establishing Various Methods of Financing Solar Energy Systems, 33 Pub. Util. Rep. 4TH 423 (1980).
- 3. At least five local California governments have passed ordinances requiring the use of solar energy to heat water:
 - (1) San Diego County, Cal., Ordinance 5324 (Dec. 12, 1978) amends the county building code to require solar energy to be the primary means of heating water for all new residential construction on parcels for which solar access is guaranteed. Ordinance 5589 (Aug. 21, 1979) amends the subdivision code to require that solar access be provided in all new subdivisions. Thus the ordinance, which only affects building on lots with guaranteed solar access, is restricted to new subdivisions. After October, 1980, the ordinance will apply to all unincorporated areas of the county. Prior to that date, it applied only to unincorporated areas not served by natural gas.
 - (2) Santa Barbara County, Cal., Ordinance 3115 (Sept. 17, 1979) requires the use of solar energy as the primary means of heating water for all new residential construction in unincorporated areas of the county not served by natural gas. The ordinance provides an exception where solar access is obstructed.
 - (3) City of San Dimas, Cal., Ordinance 678 (Sept. 26, 1979) requires that new apartment buildings be equipped with solar energy water heating systems. Also, all new residential development not a part of a subdivision must be provided with solar hot water as a prerequisite to issuance of a building permit. If a development is part of a subdivision, then all houses must be plumbed for solar hot water and fifty percent of the houses must have the solar system installed. As of one year after passage of the ordinance, all new residential development in subdivisions must provide for the installation of solar hot water systems in every house or no building permit will be issued.
 - (4) City of Cerritos, Cal., Section 4.08 of the Land Use Element of the Cerritos

mestic hot water systems are fairly simple in operation.⁴ They produce a net savings in fossil fuels⁵ and their cost and perform-

General Plan provides that consideration must be given to utilization of alternative energy resources for residential land uses. The Implementation Element, Section 18.11, promotes conservation goals by requiring solar water heating systems in at least fifty percent of the houses in new residential subdivisions. These provisions were adopted as amendments to the Cerritos General Plan on December 6, 1978.

- (5) Santa Clara County, Cal., Ordinance 1208 (June 23, 1980) provides that no building permit shall be issued for new residential construction in unincorporated areas unless a solar energy system is the primary means of heating water Exemptions exist where there is a lack of solar access and where the cost effectiveness of a solar water heating system cannot be demonstrated over a tenyear period relative to any other commercially available heating technology. Ordinance 1209 (June 23, 1980) requires that existing residential structures be fitted with solar energy water heating systems within 120 days after the recording of a contract of sale or a deed transferring title pursuant to the sale of the property. The requirement shall become operative for transfers of title made on or after January 1, 1983.
- 4. There are many different methods for heating domestic water using solar energy. The most common ones are listed below and, except for the Batch System and closed loop, are all connected to the pressurized water system and existing water heater:
 - (1) Passive. The Batch System stores water in tanks or pillows to be heated during the day and used at night. Another passive method, the Bread Box, consists of a painted water tank (often an old gas or electric water heater) placed in a glazed, insulated box. The box is designed to maximize daytime solar heating and insulate against nocturnal cooling. Cold water flows through the Bread Box and into the water heater. The Bread Box serves as a water heater in the summer and preheater in the winter. The ratio of solar-exposed surface area to water volume in the tank determines the maximum water temperature. Water temperatures of 140° F are not uncommon.
 - (2) Thermosyphon. This system uses a solar collector located at least two feet below a storage tank. Cold water enters into the storage tank near the bottom and is pulled down into the collector by gravity. As the water heats up in the collector it rises and exits through a pipe leading into the top of the storage tank. Hot water is then drawn off the top of the storage tank into the hot water heater. The advantage of this system is that it does not require a pump to circulate water through the solar collector. Since the storage tank is located above the collector, the warm water rises naturally during the heating cycle.
 - (3) Pumped or Active. Active systems are similar to Thermosyphons except that the storage tank is not located above the solar collector. If the water used is to be potable (as in all of the above systems) then the systems are called open loop. A pump is used to circulate the water in the heating cycle. The pump activates when the water in the storage tank is cooler than the water in the collector. The storage tank may also be the water heater (one-tank system) or it may be separated from the water heater (two-tank system). The advantage of a two-tank system is that the water heater can be bypassed in the summer

The closed loop system differs only in that the fluid in the solar loop is not necessarily potable. The storage tank is filled with potable water and heated by a heat exchanger. The fluid used in the collector does not mix with the water in the regular system. The advantage of the closed loop is that antifreeze or a less corrosive liquid can be run in the collector side.

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ance have been subjected to in-depth analysis. Moreover, solar domestic hot water systems are not as readily subject to the technical disputes that would distract the inquiry from legal and policy questions. Third, this issue is limited to solar mandates affecting only new residential construction because the cost effectiveness of retrofits (installations on existing housing) is disputed, and because a discussion on the mandating of retrofits would require consideration of complex issues better postponed until the threshold questions of the instant case have been addressed. Finally, only solar mandate actions in California are considered because the current interest and activity involving solar mandates in that state make California a desirable backdrop. Hopefully, by so limiting the discussion, the legal and policy debate can be defined in a relatively pure form—focusing as closely as possible on institutional considerations.

This article examines the sources of legal authority upon which a local government can base a solar mandate and attempts to identify other related legal issues. The article is divided into three parts. In Part I the sources of power upon which to ground a solar mandate⁸ are considered. This discussion involves an analysis of

TO TODAY'S ENERGY NEEDS 220 (1978), states that solar hot water systems have an energy payback of from 2.4 to 4.1 months. This figure includes the energy required to manufacture the raw materials—mostly metals—of a solar hot water system, but does not include secondary energy costs such as food for the workers, delivery fuel consumption, energy required for assembly, and energy required for installation of the solar hot water system. *Id.* at 219.

^{6.} See, e.g., League of California Cities & California Energy Commission, Solar Handbook for Local Government Officials (1979) [hereinafter cited as Handbook]; E. Pulliam, Solar Ordinance Feasibility Analysis (1978) [hereinafter cited as Feasibility Analysis].

^{7.} This is not the case for electric water heater retrofits. In a recent report to the Legislature, the PUC specifically studied solar water heaters because of their readiness for marketing. While the PUC noted the disagreement regarding the cost effectiveness of retrofitting gas water heaters, there was no such controversy among the many study participants concerning electric water heaters. The PUC evaluated several financing options and concluded that the most ambitious electric water heater solar retrofit program (in the areas served by the four major investor-owned utilities) could potentially displace nearly 100 megawatts of new capacity. Public Utilities Commission, Financing the Solar Transition: A Report to the California Legislature 65 (1980).

It should also be noted that Title 24 of the California Administrative Code prescribes a standby loss of less than four watts per square foot of tank surface area for automatic electric storage water heaters installed in buildings for which permits were issued before December 22, 1978. In addition, electric resistance water heating systems are prohibited unless the cost of equivalent gas or solar systems exceeds the life cycle cost of the electric resistance system. 24 CAL. AD. CODE § T20-1406 (1979).

^{8.} Throughout this article, the word "mandate" will be taken to mean an action by

three governmental tools that may be used to mandate—building codes, subdivision controls, and zoning. Part II contains a brief discussion of solar access and how the problems associated with solar access affect a mandate effort. Finally, Part III considers whether improper issuance of a permit to install a solar domestic hot water system will subject the local government to damages for faulty installation.

II. SOURCES OF LOCAL POWER

The powers of local governments in California differ, depending on whether the entity is a charter city, general law city, charter county, or general law county.

Charter cities derive their power to legislate from the California Constitution.⁹ A charter city has authority over municipal affairs so long as its ordinances do not conflict with the United States Constitution, California Constitution, or provisions of its own charter.¹⁰ Except as clearly and explicitly limited by the charter, a charter city is permitted full exercise over municipal affairs and restrictions on that power will not be implied.¹¹ The charter itself does not need to enumerate specifically the powers that the city desires to exercise.¹²

Because the California Constitution gives charter cities broad authority in municipal matters, the first question facing a charter city interested in enacting a solar mandate is whether or not the mandate is a matter of local or statewide concern. State general law does not bind a charter city with regard to municipal matters. Even though a matter is of statewide concern, the charter city can still enact regulations if the state legislature has not preempted the field.¹³ Whether or not a given matter is of local or statewide con-

a local governing body to require solar domestic hot water systems in all new residential dwellings.

^{9.} CAL. CONST. art. XI, § 3 (Supp. 1979) permits cities and counties to adopt charters. Charter cities are granted control over municipal affairs. *Id.* § 5. See also CAL. GOV'T CODE § 34101 (West 1968), which defines "chartered city."

^{10.} Codding Enterprises v. City of Merced, 42 Cal. App. 3d 375, 377, 116 Cal. Rptr. 730, 731 (1974).

^{11.} City of Roseville v. Terry, 158 Cal. App. 2d 75, 77, 322 P.2d 44 (1958).

^{12.} The "charter city retains complete control of municipal affairs, whether or not its charter expressly enumerates power over the specific municipal affair in question." Madsen v. Oakland Unified School Dist., 45 Cal. App. 3d 574, 579, 119 Cal. Rptr. 531, 533 (1975).

^{13.} Bishop v. City of San Jose, 1 Cal. 3d 56, 63, 460 P.2d 137, 81 Cal. Rptr. 465, 469 (1969).

cern is ultimately determined by the judiciary, though the language of any applicable state legislation will carry great weight in the court's determination.¹⁴

A charter city may also be limited by its own charter. The charter could preclude the city from enacting a solar mandate, dictate the form that a mandate must take, or specify a particular agency of local government that is responsible for energy-related matters.

General law cities, general law counties, and charter counties are not appreciably different with regard to their authority to mandate. The California Constitution provides that counties and general law cities shall have the power to pass all "local, police, sanitary, and other ordinances and regulations not in conflict with general laws." Under this constitutional grant of "home rule," California counties and general law cities have the authority to legislate and regulate any matter that is not preempted by state general law. A distinction between counties and general law cities on the one hand, and charter cities on the other, is that for counties and general law cities, once a conflict with state general law is found, their authority ends. The local or statewide nature of the issue is irrelevant to their authority. In contrast, charter cities need only be concerned with potential conflict with state law if it is determined that they are acting in an area of statewide concern.

Because counties and general law cities need not consider whether the subject of the mandate is of statewide or local concern, the primary barrier to solar mandating for counties and general law cities is the possibility of conflict with state general law.16 Moreover, once the state legislates in a particular field, it may be necessary as a practical matter for counties and general law cities to show that their actions are affirmatively authorized by that general law, rather than simply not in conflict with it. Otherwise, counties and general law cities which claim only that their mandate is not in conflict with state legislation in the field may have the mandate invalidated if a court finds that (although there is no direct conflict) state general law preempts the field. Aside from the possible strategic necessity of establishing that state general law affirmatively authorizes a local government to mandate, there is some suggestion that a showing of affirmative authorization to mandate may be required when a county or general law city attempts to implement a solar mandate through subdivision con-

^{14.} Id.

^{15.} CAL. CONST. art. XI, § 7 (Supp. 1979).

^{16.} Id.

trols.17

In quick review, the type of local government issuing a mandate, the local or statewide nature of the matter, and the provisions of state general law are important factors in determining the legality of a solar mandate (i.e., did the local government have the "power"). The technique used to implement the mandate is also an important element of the analysis. The three most feasible methods by which a California county or city may implement a solar mandate are: 1) amending the building code to require solar domestic hot water systems in all new residential construction, 2) enacting an ordinance requiring developers to install solar hot water systems as a condition of subdivision approval, or 3) creating a new zoning classification in which all new homes must use solar energy to heat water. ¹⁸ Each of these methods is discussed below.

A. Building Codes

Building codes are standards promulgated to protect the community's health, safety, and welfare—any and all of which can be threatened by shoddy, unregulated construction practices.¹⁹ Because building codes regulate the methods and materials of construction an ordinance amending the building code to require installation of solar hot water systems would seem to be an ideal method for implementing a solar mandate. In California, local discretion to amend the statewide building code may be wholly or partially preempted by the Uniform Building Code,²⁰ or by the State Energy Commission's occupation of the field of residential energy conservation.

^{17.} The case law is by no means clear. On the purpose of the Subdivision Map Act the court has said "[i]t appears that the Legislature enacted a general statute enabling general law cities, which otherwise could not control land development within their boundaries, to control subdivision." Codding Enterprises v. City of Merced, 42 Cal. App. 3d 375, 379 (emphasis added).

^{18.} It has also been suggested that the California Environmental Quality Act (CEQA) already could be read to require solar utilization in new housing. See Comment, Solar Energy in California: A Case for the Sun, 17 SAN DIEGO L. REV. 355 (1980).

^{19.} See REPORT OF THE NATIONAL COMMISSION ON URBAN PROBLEMS TO THE CONGRESS AND TO THE PRESIDENT OF THE UNITED STATES, BUILDING THE AMERICAN CITY 254 (1968); see also Taschner v. City Council, 31 Cal. App. 3d 48, 107 Cal. Rptr. 214 (1973).

^{20.} CAL. HEALTH & SAFETY CODE §§ 17910-17995 (West Supp. 1980).

1. Uniform Housing Code

The California State Housing Law²¹ directs the Commission on Housing and Community Development (CHCD) to adopt a statewide housing code.²² The housing code includes five separate codes, one of which is a statewide building code.²³ The CHCD is required by statute (general law) to adopt a statewide building code that substantially conforms with the Uniform Building Code.²⁴ This statewide building code must then be adopted by all counties and cities.²⁵ In theory, therefore, California has a single statewide building code.

Despite the interest in conformity reflected by promulgation of a statewide building code, there is considerable flexibility in the statute allowing for deviations at the local level.²⁶ The California Legislature has declared that uniformity should be achieved "within a framework of local autonomy" and has expressly provided for modifications based on local conditions.²⁷ A city or county desiring to change or modify the statewide building code. as applied within its borders, may do so if the change is accompanied by express findings that the modification is needed because of local conditions.²⁸ Although these findings must be filed with the CHCD,²⁹ the California Attorney General has issued an opinion stating that the CHCD's role is to serve as a depository for such findings, not to review, approve, or disapprove them.³⁰ In a subsequent opinion the Attorney General has stated that "local conditions," as used in the statute, refers only to geographic or topological conditions, not social or economic matters.³¹ Thus, a

^{21.} Id.

^{22.} Id. § 17921.

^{23.} Id. The five codes are the Uniform Housing Code, the Uniform Building Code, the Uniform Plumbing Code, the Uniform Mechanical Code, and the National Electrical Code.

^{24.} Id. The Uniform Building Code is issued by the International Conference of Building Officials (ICBC). The version of the Uniform Building Code adopted by the California State Building Standards Commission for uniform application throughout California is contained in Title 25 of the California Administrative Code.

^{25.} CAL. HEALTH & SAFETY CODE § 17958 (West Supp. 1980).

^{26.} Deviations from the uniform code may result from provisions in local codes that predate the 1970 Housing Law amendments. *Id.* § 17958.7. Local building departments may approve alternative materials and methods equivalent to those required by statewide provisions. *Id.* § 17951(b).

^{27. 1970} Cal. Stats., ch. 1436, at 2786 § 7.

^{28.} CAL. HEALTH & SAFETY CODE § 17958.5 (West Supp. 1980).

^{29.} Id. § 17958.7.

^{30. 55} Op. Cal. Att'y Gen. 157 (1972).

^{31. 57} Op. Cal. Att'y Gen. 443 (1974).

city or county may amend the statewide building code in response to findings that local geographic or topological conditions are such as to justify the change. In enacting a solar mandate via an amendment of the statewide building code the city or county could, for example, support its action by finding that: 1) local insolation³² is such that a solar domestic hot water system would conserve fossil fuel, and 2) the city or county has a need to conserve fossil fuel. These findings would have to be submitted to the CHCD but would not be subject to administrative review. If amendment to the statewide building code was challenged in the courts, the findings would be judicially reviewed under an "arbitrary, capricious, or entirely lacking in evidentiary support" standard.³³ Consequently, the statewide building code amendment

^{32. &}quot;Insolation" is a term used to describe the amount of sunlight at a given site. 33. The standard of review applied by the courts depends upon whether the local agency action can be characterized as legislative or adjudicative. If an action is adjudicative in nature, then the provisions of CAL. CIV. PROC. CODE § 1094.5 will apply; if the action is legislative in nature, then CAL. CIV. PROC. CODE § 1085 controls. Strumsky v. San Diego County Employees Retirement Ass'n, 11 Cal. 3d 28, 34 n.2, 520 P.2d 29, 112 Cal. Rptr. 805 (1974). Under § 1094.5, the courts apply either an "independent judgment" standard or a "substantial evidence" standard, depending upon the nature of the rights affected. Under § 1085, the standard is "arbitrary and capricious," meaning that unless the finding is completely without support in reason, it will not be disturbed by the court. Because the level of scrutiny is greater under § 1094.5, a party challenging a mandate would wish to obtain judicial review under that section. Section 1094.5 provides judicial review for "any final administrative order or decision made as a result of a proceeding in which by law a hearing is required to be given. . . ." CAL. CIV. PROC. CODE § 1094.5(a) (West 1954). The critical issue for a mandate is whether in adopting such an ordinance under CAL. HEALTH & SAFETY CODE § 17958.5, a local government is legislating, or making an administrative order or decision reviewable under § 1094.5. "Generally . . . a legislative action is the formulation of a rule to be applied to all future cases, while an adjudicatory act involves the actual application of such a rule to a specific set of existing facts." Strumsky v. San Diego County Employees Retirement Ass'n, 11 Cal. 3d 28, 35 n.2. On its face a modification of the Uniform Building Code based on findings of need due to local conditions would appear to be legislative since it would apply to future cases. However, the issue is not so easily resolved. The State Legislature, through the 1970 amendments to the State Housing Law, has declared that code uniformity is a matter of statewide interest and concern and has severely restricted local governments' power to legislate concerning building codes. See Cal. HEALTH & SAFETY CODE §§ 17910-17995 (West Supp. 1980). "A local ordinance which deals with matters of statewide concern is void if it conflicts with general state law intended by the Legislature to occupy the field to the exclusion of municipal regulation." Younger v. Berkeley City Council, 45 Cal. App. 3d 825, 830, 119 Cal. Rptr. 830, 832 (1975). If the State Legislature intended to preempt the building code field, then local government actions under the provisions of the State Housing Law can only be administrative. The weight of California law indicates that the State Legislature has not preempted the building code field. First, the Legislature anticipated, and provided for, considerable deviation from the Uniform Code. See note 25 supra. Moreover, the preemption argument has been rejected in Baum Electric Co. v. City of Huntington Beach, 33 Cal. App. 3d 573,

should be supported by data collected by the city council when it was determining the appropriateness and necessity of the solar mandate.

The above discussion assumes that a solar mandate is in conflict with the statewide building code. If in fact no conflict exists, the city or county may be free from even the minimal obligation of finding a need based on local conditions as support for the amendment to the statewide building code. For example, the State Housing Law contains a provision declaring that "any city or county may require, by ordinance or regulation, that new buildings be constructed in a manner permitting the installation of solar heating or nocturnal cooling devices."34 This provision could be construed as authorizing cities and counties to exert their authority over the issuance of building permits to promote the expanded use of solar-energy systems in new construction. Though the statute only directly authorizes regulations to facilitate the installation of solar devices, it may not be an unreasonable extension of that regulatory authority to require that the devices actually be installed. Because the courts have held that any ad-

109 Cal. Rptr. 260 (1973). In Baum the court allowed the city to require the use of larger conductors than required by the Uniform Code, noting that cities are not precluded from adopting additional requirements on subjects not covered by departmental regulations. Id. at 584. But cf. Danville Fire Protection Dist. v. Duffel Financial & Constr. Co., 58 Cal. App. 3d 241, 129 Cal. Rptr. 882 (1976), in which the court concluded that "since 1970 the state had preempted the field [of sprinklers and smoke alarm systems] pursuant to Health and Safety Code sections 17921 and 17922. . . ." Id. at 243. However, the Danville court also suggested that, had the District filed findings as required by Cal. Health & Safety Code § 17958.7, it might have sustained the ordinance. Id. at 247. The preemption argument is also contrary to the language of the statute in that the Legislature declared that "uniformity can be achieved within a framework of local autonomy by allowing local governments to adopt changes . . . based on differences in local conditions." 1970 Cal. Stats., ch. 1436, at 2786 § 7. The Attorney General has also rejected the preemption argument. In an opinion restricting the scope of "local conditions" to geographic and topological conditions, the Attorney General concluded that in adopting a local condition ordinance, the local government "would be acting legislatively. . . ." 57 Op. Cal. Att'y Gen. 443, 446 (1974).

Given the declaration of the Legislature, and the weight of case law, it is likely a court would find a solar mandate enacted by a local government reviewable under § 1085, not § 1094.5. Under § 1085 the court must limit its examination to a determination of whether the action was arbitrary, capricious, or entirely lacking in evidentiary support, or whether it has failed to follow the procedure and give notice as required by law. Pitts v. Perluss, 58 Cal. 2d 824, 833 (1962). Therefore, if a local government follows lawful procedures in adopting a mandate, and sets forth findings pursuant to Cal. Health & Safety Code § 17958.7 which show that local conditions necessitate the modification, it will be very difficult to invalidate the mandate through the judicial review process.

^{34.} CAL. HEALTH & SAFETY CODE § 17959 (West Supp. 1980).

ministrative regulation (i.e., in this instance the statewide building code) that restricts the scope of a statute is void by law,³⁵ a determination that a solar mandate is in conflict with the statewide building code as promulgated by the CHCD could lead to a finding by the courts that, to the extent the solar mandate is consistent with the State Housing Law and in conflict with the statewide building code, the code is void. Such a finding would depend upon a determination that the solar mandate falls within the above quoted statutory language. It is not obvious that such a determination would be made, and therefore a city or county would be in a much stronger legal position if the findings of local need were filed with the CHCD.

2. State Energy Recources Conservation and Development Commission (CEC): The Warren-Alquist Act

A solar mandate implemented through a modification of the statewide building code represents a regulation of building design to reduce energy consumption. The Warren-Alquist Act (Act),³⁶ which created the CEC, has provisions which vest authority in the CEC to promulgate statewide standards for building design and energy performance.³⁷ These provisions (and the standards that the CEC issues under their authority) must be enforced by the building department in each California city or county (whether general law or charter).³⁸

The Act also contains a preemption waiver,³⁹ the existence of which can be construed to imply an intent on the part of the Legislature to preempt the field of building regulation for the purpose of conserving energy.⁴⁰ The preemption section, 25402.1(f)(2), provides that the CEC's regulations will not affect the enforce-

^{35. &}quot;Administrative regulations that alter or amend the statute or enlarge or impair its scope are void and courts not only may, but it is their obligation to strike down such regulations." Morris v. Williams, 67 Cal. 2d 733, 748, 433 P.2d 697, 63 Cal. Rptr. 689 (1967).

^{36.} CAL. PUB. RES. CODE §§ 25000-25986 (West Supp. 1980).

^{37.} Id. § 25402.

^{38.} Id. § 25402.1(e).

^{39.} Id. § 25402.1(f)(2). This section of the Code provides that local energy conservation or energy insulation ordinances are not prohibited by the Warren-Alquist Act provisions if: (1) the local government files a determination with the CEC that the ordinance is cost effective and, (2) the CEC determines that energy consumption with the ordinance will not be greater than without the ordinance.

^{40.} That is, because the field is preempted by the state, a preemption waiver is required to define those situations in which local governments can act to conserve energy via building regulations.

ment of local energy conservation measures if the CEC determines that the measures will save energy and the local government files with the CEC findings that the measures are cost effective. Although charter cities have exclusive authority over their own municipal affairs, the Act's preemption section indicates that energy conservation and energy efficiency are matters of statewide concern.

To understand the impact of the Warren-Alquist Act on a solar mandate, it must first be determined if a solar mandate would fall within the scope of the Act. If a solar mandate is within the scope of the Act, then the preemption waiver of section 25402.1(f)(2) must be analyzed to determine the CEC's power with respect to a city or county that desires to mandate.

Section 25402 directs the CEC to set standards "to reduce the wasteful, uneconomic, and inefficient or unnecessary consumption of energy"41 (emphasis added). Sections 25402(a) and 25402(b) specify the regulations that the CEC must issue to control energy use in new buildings. Section 25402(a) directs the CEC to promulgate standards for energy efficiency, including such matters as lighting, climate control systems, and building design.⁴² Section 25402(b) directs the CEC to prescribe regulations for energy conservation design standards, which are to be performance standards defining permissible levels of energy consumption per gross square foot of floor space.⁴³ The CEC standards issued under the authority of these provisions are contained in Title 24 of the California Administrative Code. The Act states that "no city, county, city and county, or state agency shall issue a permit for any building unless the building satisfies the standards prescribed by the commission pursuant to [section 25402(a) and (b)]."44

Whether or not a solar mandate falls within the scope of these sections depends first upon whether or not the solar mandate is designed "to reduce the wasteful, uneconomic, and inefficient or unnecessary consumption of energy." Because such a reduction is the objective of all § 25402 standards, local action undertaken for some other purpose would be arguably outside the scope of these standards. A solar mandate clearly is intended to reduce the "unnecessary consumption of energy." But is a solar mandate intended to reduce the "unnecessary consumption of energy" within

^{41.} Id. § 25402.

^{42.} Id. § 25402(a).

^{43.} Id. § 25402(b).

^{44.} Id. § 25402(e).

the meaning of § 25402's regulation of building efficiency (as in § 25402(a)), or as an energy conservation design standard (as in § 25402(b))? Because of the language of the Act, it may be difficult to characterize a solar mandate as either.

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A solar hot water system is a device for providing hot water by using the sun as the primary energy source. A solar mandate involves the use of this alternative energy source (alternative to gas or electricity); it is not concerned with efficiency. Efficiency pertains to the reduction of the amount of energy required to perform a given task. Though § 25402(a) does not expressly define efficiency, it does give examples of what is intended. The regulations are to prescribe lighting, insulation, climate control systems, and other building design and construction standards to increase efficiency in the use of energy.⁴⁵ Because a solar hot water system changes the source of the energy and not the amount of energy required, it is likely that solar hot water systems were not contemplated in the language of § 25402(a) as efficiency devices.

In the same manner § 25402(b), although requiring energy conservation design performance standards, does not expressly include in its language the regulation of solar hot water systems. Energy conservation via design performance standards is directed toward reduced use of energy, not changed sources of energy.⁴⁶ However, the Act declares that the standards "may . . . include devices, systems, and techniques required to conserve energy."⁴⁷ A review of the CEC standards reveals that the standards do not include any effort to bring solar hot water systems within the scope of the Act.⁴⁸ Whether or not a solar hot water system is an energy conservation device under the Act remains an unanswered question, and therefore the express grant of authority to use "spe-

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^{45.} Id.

^{46.} The Legislature distinguishes between energy conservation measures and devices using renewable energy sources. Though the distinction is not absolutely clear in the Warren-Alquist Act, conservation measures are treated differently than devices which use renewable energy sources for the purpose of tax credits. See note 1 supra.

^{47.} CAL. PUB. RES. CODE § 25402(b) (West Supp. 1980).

^{48.} CEC building standards are contained in Title 24 of the California Administrative Code. Solar hot water systems are required under these standards only if natural gas is not available and the life cycle cost of an electric water heating system is greater than the life cycle cost of the equivalent solar hot water system. 24 Cal. Ad. Code § T20-1406(b) (1979). This reference to solar hot water systems is not primarily concerned with the solar hot water system, but rather is an effort to substantially curtail the installation of electric water heaters. Other than this single reference to solar hot water systems, Title 24 is silent as to the utilization of solar energy to heat domestic water.

cific devices" to achieve conservation via design performance standards may not empower the CEC to preempt local government solar mandates. Thus, the Act does not expressly preempt local government from mandating. But the powers of the CEC are to be construed liberally,⁴⁹ and if the CEC chose to include solar hot water systems within the scope of § 25402 regulations, the courts may nonetheless find that these regulations preempt local government actions.

The above argument presents the case for finding that the CEC exerts no authority over solar mandating by local governments. Because this analysis rests exclusively on statutory construction (i.e., there is no case law to support it) it is important to examine the role that the CEC would play if solar mandates are found to be within the scope of local energy conservation standards. This examination is particularly important because the Act itself states that the powers of the CEC are to be construed liberally. 50

If a solar mandate is considered to be an energy conservation standard, § 25402.1(f)(2) provides that the solar mandate will be preempted unless the CEC determines that the mandate will result in reduced energy consumption and the enacting entity files express findings with the CEC stating that the mandate is cost effective.51 Use of solar hot water systems does reduce the consumption of conventional energy.⁵² Since our initial assumption for concluding that solar mandates are covered by the Warren-Alquist Act is that changing to an alternative energy source is construed to be energy conserving, the solar hot water system by definition passes the test of reduced energy consumption. The only remaining requirement is that the local government file findings of cost effectiveness with the CEC. To determine whether the CEC is granted any review power over this finding, it is helpful to look to the legislative history of the cost effectiveness provision in the Act.

The requirement for filing a finding of cost effectiveness was added by amendment in 1978.⁵³ The Assembly Bill's history reveals an evolution that suggests the legislative intent regarding the "cost effective" language. This evolution strongly suggests that local government is authorized to determine autonomously

^{49.} Id. § 25218.5.

^{50.} CAL. Pub. Res. Code § 25218.5 (West Supp. 1980).

^{51.} Id. § 25402.1(f)(2).

^{52.} See note 5 supra.

^{53. 1978} Cal. Stats., ch. 248 § 1.

that the solar mandate is cost effective, and that the CEC is not granted any substantive review power.⁵⁴ Thus, the CEC is to act as a repository for local findings of cost effectiveness in much the same way that the CHCD is to act as a depository for local findings of need based on local conditions for changes in the building code.⁵⁵ Such a function is not inconsistent with the powers and duties of the CEC, which is directed by the Act to "serve as a repository within State government" for energy related information.⁵⁶ Therefore, even if a mandate does fall within the scope of the Act, the power of the CEC to override a local decision to mandate is apparently minimal.

3. Overview of Building Codes

For a city or county to mandate the installation of solar domestic hot water systems by amending its building code it must find:

- A need to reduce energy use within its borders from the statewide model.
- 2) That geographical and topological conditions within the city or county are such that there is sufficient local insolation to justify inclusion of a solar mandate in the local building code as an acceptable variation from the statewide code.
- 3) That solar hot water systems in new residential construction are cost effective as required by the preemption waiver under the Warren-Alquist Act. This finding should be supported by studies comparing solar with other available energy sources.

The findings of steps (1) and (2) above must be filed with the CHCD. The findings of step (3) must be filed with the CEC.⁵⁷ The solar mandate ordinance itself must be submitted to the CEC

^{54.} The "cost effective" language was added to § 25402.1(f)(2) by amendment in 1978 with the passage of Assembly Bill 2373 (1977-1978 Session) and Senate Bill 2052 (1977-1978 Session). The Assembly Bill gives the best indication of the legislative intent behind the use of the phrase "cost effective." Referring to the original draft of the amendment, the Legislative Counsel's Digest comments that local regulations would not be preempted if the CEC determined they would be cost effective (and would require a diminution of energy consumption levels currently permitted by the rules and regulations). This position is changed for subsequent drafts—including the final comments accompanying the bill—to require a local government to file the basis for its determination that energy conservation or energy standards are cost effective (and require a diminution of energy consumption). The change appears to be an attempt to ensure local autonomy in determining cost effectiveness. The final draft of the Legislative Counsel's Digest declares that the local entity need only file the basis for its determination that the regulation is cost effective.

^{55.} See notes 29-30 & accompanying text supra; 55 Op. Cal. Att'y Gen. 157 (1972).

^{56.} CAL. PUB. RES. CODE § 25216.5 (West Supp. 1980).

^{57.} See 24 CAL. AD. CODE § T20-1409(b)(1) (1978).

for its independent determination that the mandate will lead to a reduction in energy consumption by affected buildings below the levels of energy consumption that would be expected if only the CEC standards applied.

B. Subdivision Controls and the Subdivision Map Act

The subdivision of land involves the sale of less than the entire property owned by the seller. To subdivide into five or more lots tentative and final subdivision maps must be prepared and submitted for local government approval. Using this approval power as leverage to extract concessions from developers or subdividers for the community is not new. In recent times the approval power over subdivision maps has become one of the most important land use controls available to local governments.58 The theory behind a local government's power to control subdivisions is that, generally, the "subdivider is concerned only with making a reasonable return on his investment The community, however, has a great interest in the subdivision because it must live indefinitely with the mistakes or accomplishments of the subdivider."59 Also, because community services must be extended to the new subdivision, conditions placed upon map approval are sometimes justified as an effort by the local government to impose on the developer the cost of delivering those services.

A local government's use of its approval power over subdivision maps to require solar hot water systems in all new residential structures in new subdivisions is one means of implementing a solar mandate. However, there are at least two difficulties with using subdivision controls to implement a solar mandate.

First, an enforcement problem arises in the situation in which the subdivider is not the builder. The problem is certainly not insurmountable, but it does not lend itself to conventional control mechanisms. A requirement that equitable servitudes be included in every deed as the lots are sold could accomplish the objective, 60 except that servitudes are generally enforced by the owners of the

^{58.} D. Hagman, Public Planning and Control of Urban and Land Development: Cases and Materials 603 (2d ed. 1980).

^{59.} Comment, Land Development and the Environment: The Subdivision Map Act, 5 PAC. L.J. 55, 87 (1974).

^{60.} In California, equitable servitudes can be created only by deed. See Riley v. Bear Creek Planning Comm., 17 Cal. 3d 500, 551 P.2d 1213, 131 Cal. Rptr. 381 (1976). For the California law for creating covenants that will run with the land, see CAL. CIV. CODE §§ 1464-1468 (West 1954).

lots to which the benefit of the servitude attaches. This may lead to a lack of enforcement.

The second difficulty with using subdivision controls is the rather obvious fact that they can only be applied to subdivisions. All new construction that is not part of a subdivision would be beyond the scope of the mandate. Moreover, subdivisions of less than five lots may not be included within the scope of the mandate because of express limitations contained in the Subdivision Map Act (SMA) on the permissible regulation of these subdivisions.

The SMA is the primary state law controlling the use of subdivision approval power by local governments.⁶¹ The SMA controls the power of counties and general law cities to regulate subdivisions⁶² and may preempt charter cities from acting in a manner inconsistent with the SMA.⁶³ According to the SMA a "subdivision" is "any division of land."⁶⁴ The SMA requires the filing of a tentative map and a final map for any subdivision of land resulting in five or more parcels.⁶⁵ The procedures for filing and approving tentative and final maps are set out in the SMA.⁶⁶ These procedures must be followed by all cities and counties.

The SMA regulates the "design" and "improvement" of land prior to division into parcels. "Design," as used in the SMA, refers to the overall layout of the subdivision with respect to the location and orientation of streets and lots.⁶⁷ It does not refer to the design of structures. "Improvements," on the other hand, are infrastructural additions like sewers, utility connections, and grad-

^{61.} CAL. GOV'T CODE §§ 65100-65700 (West Supp. 1978).

^{62.} Codding Enterprises v. City of Merced, 42 Cal. App. 2d 375, 116 Cal. Rptr. 730 (1974).

^{63.} Hirch v. City of Mountain View, 64 Cal. App. 3d 425, 134 Cal. Rptr. 519 (1976).

^{64.} CAL. GOV'T CODE § 66424 (West Supp. 1978).

^{65.} Id. § 66426. Several exceptions are listed where division into five or more parcels requires only a parcel map.

^{66.} Id. § 66451.

^{67.} Id. § 66418:

[&]quot;Design" means: (1) street alignments, grades and widths; (2) drainage and sanitary facilities and utilities, including alignments and grades thereof; (3) location and size of all required easements and rights-of-way; (4) fire roads and firebreaks; (5) lot size and configuration; (6) traffic access; (7) grading; (8) land to be dedicated for park or recreational purposes; and (9) such other specific requirements in the plan and configuration of the entire subdivision as may be necessary or convenient to insure conformity to or implementation of the general plan required by Article 5 (commencing with Section 65300) of Chapter 3 of Division 1 of this title, or any specific plan adopted pursuant to Article 8 (commencing with Section 65450) of Chapter 3 of Division 1 of this title.

ing.68

A county or general law city may claim that it is mandating solar hot water systems as a "design" or "improvement" under the SMA. A court reviewing the matter, however, may conclude that the mandate regulates neither a "design" nor an "improvement" and, thus, that the county or general law city has no source of authority to use subdivision controls to implement a solar mandate. Alternatively, the court may conclude that to the extent the mandate does regulate a "design" or "improvement," the regulation conflicts with the language or intention of the SMA. In the first case, the question is whether or not a mandate can be properly held to be within the scope of the SMA. The alternate possibility is that once the mandate is found to be within the scope of the SMA, the courts may find that such a mandate is prohibited by the SMA.

1. Determining Whether a Solar Mandate is Within the Scope of the Subdivision Map Act

The SMA only authorizes regulation of "designs" and "improvements." Because by definition neither "designs" nor "improvements" relate directly to structures, a mandate would appear to involve a regulation outside the scope of the SMA. However, one could argue that certain powers under the SMA suggest support for solar utilization. The SMA does grant cities and counties the power to require dedication of solar access easements as a condition of map approval, 69 and requires that tentative maps "provide, to the extent feasible, for future passive or natural heating opportunities." Feasibility is determined by reference to economic, environmental, social, and technological factors. It

^{68.} Id. § 66419:

⁽a) "Improvement" refers to such street work and utilities to be installed, or agreed to be installed, by the subdivider on the land to be used for public or private streets, highways, ways, and easements, as are necessary for the general use of the lot owners in the subdivision and local neighborhood traffic and drainage needs as a condition precedent to the approval and acceptance of the final map thereof.

⁽b) "Improvement" also refers to such other specific improvements, the installation of which, either by the subdivider, by public agencies, by private utilities, by any other entity approved by the local agency or by a combination thereof, is necessary or convenient to insure conformity to or implementation of the general plan required by Article 5 (commencing with Section 65300) of Chapter 3 of Division 1 of this title, or any specific plan adopted pursuant to Article 6 of Chapter 3 of division 1 of this title.

^{69.} Id. § 66476 (West Supp. 1978).

^{70.} Id. § 66473.1.

^{71.} *Id.*

should be noted, though, that the power to require dedication of an easement is expressly within the SMA's definition of "improvement" and the provisions for natural or passive heating opportunities refer to lot orientation, which is expressly included in the definition of "design." Thus, even these supportive features do not extend beyond the express definition of the scope of the SMA. They would, however, tend to infer a generally favorable attitude toward use of solar energy. More substantial support for mandating may be provided by the interaction between the Subdivision Map Act and planning law.

It can also be argued that the definitions of "design" and "improvement" are somewhat open ended.⁷² Both include actions "necessary or convenient to insure conformity to or implementation of the general plan." To put the "general plan" part of the definitions in context, a brief description of California planning law may be helpful.

State law requires that every city and county in California create a general plan as a guide to development and growth.⁷³ Every general plan must contain at least nine specific elements. These elements are: land use, circulation, housing, open space, conservation, noise, seismic safety, scenic highway, and safety elements.⁷⁴ Charter cities, as well as counties and general law cities, are required to formulate and adopt these nine mandatory elements.⁷⁵ Optional elements, in addition to the mandatory elements, are permitted by state law⁷⁶ and are quite common.⁷⁷ In 1977, eight local governments had adopted energy elements for their general plans.⁷⁸

Planning law is tied to the SMA by the consistency doctrine, which requires that subdivision approval be consistent with the general plan of the approving jurisdiction.⁷⁹ This requirement applies to counties and general law cities⁸⁰ and, in some instances, to

^{72.} See notes 67-68 supra.

^{73.} Id. §§ 66410-66499.58.

^{74.} Id. §§ 66100-66101.

^{75.} Id. § 65302.

^{76.} Id. § 65303(k) allows "such additional elements dealing with other subjects which in the judgment of the planning agency relate to the physical development of the county or city."

^{77.} See Office of Planning and Research, Local Government Planning Survey (1978). Hundreds of optional elements had been adopted by 1977, the most popular being the recreation element, adopted by 187 jurisdictions. Id. at 6.

^{78.} Id. at 6.

^{79.} CAL. GOV'T CODE § 66473.5 (West Supp. 1978).

^{80.} Woodland Hills Residents Ass'n v. City Council, 23 Cal. 3d 917, 593 P.2d 200,

charter cities. Under the consistency doctrine, a local government with an energy element in its general plan could not approve a subdivision that failed to conform to the requirements of the energy element. If that element contained a solar mandate, a subdivision could not be approved without including solar domestic hot water systems in all residential construction. Because the SMA may be the only source of power for counties and general law cities to impose conditions on subdivisions, they may not be able to extend their authority beyond the limited power to impose conditions within the scope of the SMA. Because of this limitation, an express provision in the general plan calling for a solar mandate implemented through subdivision controls may, through the consistency requirement, be the only way for counties and general law cities to implement a solar mandate in this manner. Charter cities, which might not be bound by the consistency doctrine, would be more concerned with avoiding preemption and could therefore argue that a mandate implemented through subdivision controls does not fall within the scope of the SMA. The charter city would then be imposing the solar mandate under its constitutional authority over municipal affairs.81

Therefore, for counties and general law cities, including an energy element may solve the problem of finding an affirmative grant of authority to mandate. In any case, putting an energy element in a general plan is a good method of coordinating efforts to conserve energy within a city's border. A good example of such planning is provided by San Diego County which adopted an energy element in 1977.82 San Diego County has since amended its building code, in accord with the energy element of its general plan, to require solar hot water systems in new residential buildings provided with guaranteed solar access.83

¹⁵⁴ Cal. Rptr. 503 (1979). The difficulty with saying that consistency applies to charter cities in general is the failure of the Government Code to so specify. The *Woodland Hills* decision, *id.* at 936, indicates that express findings of consistency between the general plan and a subdivision are required, but that judicial review may be restricted to determining whether there is substantial evidence to support the finding. See DiMento, Developing the Consistency Doctrine: The Contribution of the California Courts, 20 Santa Clara L. Rev. 285 (1980).

^{81.} CAL. CONST. art. XI § 5 (Supp. 1979).

^{82.} San Diego County General Plan—1990, Part XI, Energy Element (adopted Nov. 15, 1977). See also Santa Barbara County, Draft Energy Element 101 (1972).

^{83.} See note 3 supra. The solar access provision effectively restricts the applicability of the ordinance to land subdivided at least 30 days after August 21, 1979. On this date the San Diego County Solar Access Law was passed, which required new subdivisions to provide access to adequate insolation for each lot.

The ability of a local government to place an energy element in its general plan is clear. The mandatory conservation element does not bar an energy element and, in fact, itself could be used to put energy planning in the general plan. The outline of the conservation element in the authorizing legislation does not include any mention of energy or conservation of energy; but the legislation does provide that the conservation element must be concerned with the "conservation, development and utilization of natural resources."⁸⁴ It is therefore not unreasonable for a local government to include some energy planning, either as part of the conservation element or separately.

 Determining if a Mandate, although Within the Scope of the SMA, is Nonetheless Prohibited by Express Limitations Within the SMA

Even if a mandate is found to fall within the definition of either an "improvement" or a "design," conditioning the approval of a subdivision map upon installation of solar domestic hot water systems may be prohibited. The SMA contains a list of the permissible reasons for denying map approval⁸⁵ and a recent Attorney

84. Id. § 65302(d):

A conservation element for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals, and other natural resources. That portion of the conservation element including waters shall be developed in coordination with any countywide water agency and with all district and city agencies which have developed, served, controlled or conserved water for any purpose for the county or city for which the plan is prepared. The conservation element may also cover:

- (1) The reclamation of land and waters.
- (2) Flood control.
- (3) Prevention and control of the pollution of streams and other waters.
- (4) Regulation of the use of land in stream channels and other areas required for the accomplishment of the conservation plan.
 - (5) Prevention, control, and correction of the erosion of soils, beaches, and shores.
 - (6) Protection of watersheds.
 - (7) The location, quantity and quality of the rock, sand and gravel resources.

The conservation element shall be prepared and adopted no later than December 31, 1973.

85. Id. § 66473:

A legislative body of a city or county shall deny approval of a final or tentative map if it makes any of the following findings:

(a) That the proposed map is not consistent with applicable general and specific plans.

General's opinion suggests that this list is exhaustive.86 If this opinion is correct, only conditions that find support in the listed reasons for denying approval can be enforced. The list of conditions referred to by the Attorney General applies only to tentative and final maps.⁸⁷ Tentative and final maps are only required for subdivisions of five or more parcels. Unless a local ordinance says otherwise,88 only a parcel map is required for subdivisions of less than five parcels.⁸⁹ The procedure for approval and conditional approval of parcel maps is left to the local government, 90 but allowable conditions are limited to the "dedication of rights-of way, easements and the construction of reasonable offsite and onsite improvements of parcels being created."91 Thus, the extent of permissible conditions on parcel maps is even more restrictive than the extent of permissible conditions on tentative and final maps.

Despite the Attorney General's opinion that tentative or final subdivision maps may only be denied approval for reasons expressly listed in the SMA, a solar mandate is arguably covered by those reasons because of the reliance on conformity with the general plan.92 For subdivisions of less than five parcels, the argu-

⁽b) That the design of improvement of the proposed subdivision is not consistent with applicable general and specific plans.

⁽c) That the site is not physically suitable for the type of development.

⁽d) That the site is not physically suitable for the proposed density of develop-

⁽e) That the design of the subdivision or the proposed improvements are likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.

⁽f) That the design of the subdivision or the type of improvements is likely to cause serious public health problems.

⁽g) That the design of the subdivision or the type of improvements will conflict with easements, acquired by the public at large, for access through or use of, property within the proposed subdivision. In this connection, the governing body may approve a map if it finds that alternate easements, for access or for use, will be provided and that these will be substantially equivalent to ones previously acquired by the public. This subsection shall apply only to easements of record or to easements established by judgment of a court of competent jurisdiction and no authority is hereby granted to a legislative body to determine that the public at large has acquired easements for access through or use of property within the proposed subdivision.

^{86. 62} Op. Cal. Att'y Gen. 233 (1979).

^{87.} CAL. GOV'T CODE § 66473 (West Supp. 1978).

^{88.} Id. § 66412.5.

^{89.} *Id.* § 66426.

^{90.} Id. § 66463.

^{91.} Id. § 66411.1.

^{92.} Id. § 66473(a).

ment is weaker. In both cases, however, the permissibility of the conditions rests upon the ability to tie the condition to some element of the locality's general plan and then justify the condition on the basis of the consistency doctrine.

If conditions are to be imposed under the SMA, they must be imposed by ordinance, and the map for a given subdivision must be disapproved if it fails to conform with ordinances passed pursuant to the SMA.93 Case law indicates that such conditions may only be imposed to fulfill "public needs" emanating from the proposed development.94 The limits of the reach of "public needs" are probably established by Associated Home Builders v. City of Walnut Creek. 95 Walnut Creek dealt with an exaction of land or a fee as a condition of subdivision approval. The court upheld an ordinance enacted under the SMA in accord with the recreational element (an optional element) of Walnut Creek's general plan. The ordinance required a developer either to dedicate land for use as a park or to pay a fee in lieu of dedication. The court's reasoning rested upon the fact that developments not only use up a scarce commodity (open space for recreation) but also increase the demand for that commodity (by increasing the population of the city). Though a mandate cannot readily be characterized as an exaction if solar hot water systems are already determined to be cost effective, 96 the language of Walnut Creek is still supportive of a solar mandate implemented through subdivision controls. By substituting "energy supplies" for its open space counterpart, the Walnut Creek opinion is readily adapted to today's energy situation:

[The energy supply] in a community is a limited resource which is difficult to conserve in a period of increased population pressure. The development of a new subdivision in and of itself has the counterproductive effect of consuming [the opportunity to offset fossil fuel use], while at the same time increasing the need for [energy supplies]. In terms of economics, subdivisions diminish supply and

^{93.} Id. § 66473.5.

^{94.} Scrutton v. County of Sacramento, 275 Cal. App. 2d 412, 79 Cal. Rptr. 872 (1969).

^{95. 4} Cal. 3d 633, 484 P.2d 606, 94 Cal. Rptr. 630 (1971).

^{96.} To the extent that solar energy is cost effective, and cost effective is taken to mean that the savings of the system will at some point cancel the additional cost of installing and purchasing the system, the solar mandate ordinance can be seen as cost neutral. Though the builder may spend more to build the homes, those costs generally are passed through to the purchaser and therefore must be examined from the purchaser's point of view. In this sense the solar requirement, as cost neutral to the purchaser, cannot be considered an exaction.

increase demand.97

The congruence between solar energy and raw land in this paraphrasing is justified by the recognition that it costs much more to retrofit a house with a solar hot water system than it does to install such a system during construction. Clearly, the higher cost is a disincentive to retrofit. Therefore, in a very real sense, the failure to install a solar hot water system during construction consumes the potential in the community for utilization of solar energy.

The bottom line of this discussion is that subdivision controls may be used to implement a solar mandate. Though the law of subdivision controls remains undefined relative to mandating, the inclusion of a solar mandate in the general plan may clarify the propriety of mandating through subdivision controls. Problems which may arise as to the permissibility of a mandate as a condition of map approval may also be mitigated by including the mandate in the general plan.

C. Zoning

In Village of Euclid v. Ambler Realty Co., 98 the United States Supreme Court approved the use of zoning to control the course of land development in such a way as to protect certain uses of land, particularly single family dwellings, from other incompatible uses, like industrial facilities. 99 Since Euclid, local governments' zoning authority has become a powerful tool which can be employed to control the use of land in almost any manner that can be justified by the need to protect the health, safety, and general welfare of the community. 100 Though zoning has generally represented a barrier to the widespread use of solar energy, 101 this discussion is directed at the positive potential of zoning as a device to promote solar energy use through a solar mandate.

^{97.} Associated Home Builders v. City of Walnut Creek, 4 Cal. 3d 633, 641 (1971).

^{98. 272} U.S. 365 (1926).

^{99.} Id. at 388.

^{100.} See, e.g., Associated Home Builders v. City of Livermore, 18 Cal. 3d 582, 557 P.2d 473, 135 Cal. Rptr. 41 (1976).

^{101.} See, e.g., Miller, Legal Obstacles to Decentralized Solar Energy Technologies: Part II, 1 Solar L. Rep. 761 (1979); P. Spivak, Land-Use Barriers and Incentives to the Use of Solar Energy (1979) (Solar Energy Research Institute/TR-62-267). In California, the use of zoning or of restrictive covenants as a barrier to solar utilization is banned by state law. Cal. Gov't Code § 65850.5 (West Supp. 1980); Cal. Health & Safety Code § 17959.1 (West Supp. 1980). These provisions apply to charter cities, counties, and general law cities.

1. Types of Zoning

There are basically two types of zoning ordinance—the use ordinance and the bulk ordinance. Zoning is employed to control uses by dividing the city into areas, each with a specified permissible land-use activity, such as single-family residential, multifamily residential, commercial, industrial, etc. The bulk ordinances are applied within use zones to control the separation of structures, the height of the structures, the extent to which each lot in the zone may be covered with structures, and architectural or aesthetic characteristics of structures in a zone. A solar mandate would be implemented through a use zone.

Two use-zone techniques which lend themselves to mandating are overlay zones and Planned Unit Developments (PUD's). Overlay zoning is a technique through which an additional zoning limitation is imposed upon an area already bound by another zoning classification. ¹⁰² In that area, the limitations of both zoning classifications would then apply to all lots. For example, an area zoned for single-family residential dwellings might be covered by an overlay zone which required solar hot water systems. This area would then have all the characteristics of a single-family residential zone with an additional requirement for solar hot water systems. The technique permits a great deal of flexibility in the application of the solar mandate.

PUDs can also be used to implement a solar mandate in a flexible manner. ¹⁰³ An ordinance requiring solar hot water systems in PUD districts would amount to a zoning technique for accomplishing the same objectives sought through subdivision controls discussed in the previous section of this article. A PUD is essentially a zoning classification for a subdivision, but it frees the land from some of the inflexibilities of more traditional zoning classifications. ¹⁰⁴ Because the PUD zone is used only when a single property owner owns two or more contiguous lots and requests that the property be classified as a PUD, ¹⁰⁵ a solar mandate imple-

^{102.} See Environmental Law Institute, Solar Access Law: Protecting Access to Sunlight for Solar Energy Systems 45 (1979) [hereinafter cited as Solar Access].

^{103.} The California Court of Appeal for the First District has held that PUD's are not in conflict with CAL. GOV'T CODE § 65852—the zoning uniformity requirement—and that PUD's are therefore permissible zoning classifications. Orinda Homeowners Comm. v. Board of Supervisors, 11 Cal. App. 3d 768, 90 Cal. Rptr. 88 (1970).

^{104.} R. WRIGHT, LAND USE IN A NUTSHELL 9 (1978).

^{105.} See, e.g., Millbrae Ass'n for Residential Survival v. City of Millbrae, 262 Cal. App. 2d 222, 69 Cal. Rptr. 251 (1968).

mented in this manner would fail to reach much of the new construction. Wherever the builder was satisfied with the existing zoning classification, the PUD zone would not be requested and the construction would not be affected by a solar mandate implemented through a PUD zoning ordinance. On the other hand, PUD's can be used in redevelopment projects in which the PUD classification would be beyond the discretion of the developer.

2. Zoning Authority

The California Constitution gives charter cities the power to control municipal affairs. 106 Zoning is unquestionably a municipal affair¹⁰⁷ and, therefore, the charter city is unimpeded by general law except to the extent that CEC authority can be exerted. 108 Counties and general law cities, on the other hand, must conform their zoning activities to the dictates of general law. 109 The standards for adoption and administration of zoning regulations for counties and general law cities are contained in the California Government Code (Code). 110 The Code grants a wide latitude to local government to "regulate the use of buildings, structures and land . . . and the use of natural resources."111 But this wide latitude is limited by the requirement that all zoning be consistent with the locality's general plan. 112 This requirement also applies to charter cities with populations over 2,800,000.113 It is unlikely that a city's general plan would be inconsistent with a solar mandate but, as with subdivision controls, 114 if an energy element were added to a city's general plan and that element called for a

^{106.} CAL. CONST. art. XI, § 5 (Supp. 1979).

^{107.} The power to zone is derived from CAL. CONST. art. XI, § 7 (Supp. 1979) and is not bestowed by the Legislature. Taschner v. City Council, 31 Cal. App. 3d 48, 107 Cal. Rptr. 214 (1973). But zoning must be exercised in conformity with the minimum requirements of state law. Id. at 63. The legislative statement concurring with the notion that zoning is a local matter is contained in CAL. GOV'T CODE § 65800 (West Supp. 1980).

^{108.} See notes 36-56 & accompanying text supra.

^{109.} Although the State Constitution yields to counties and general law cities the power to pass "local, police, sanitary and other ordinances and regulations not in conflict with general laws," CAL. CONST. art. XI, § 7 (Supp. 1979), general law still controls zoning in counties and general law cities. See Hurst v. City of Burlingame, 207 Cal. 134 (1929). The phrase "not in conflict with general law" modifies "local," "police," and "sanitary," as well as "other ordinances." Consequently, even though zoning is an exercise of the police power, it still must conform with general law.

^{110.} CAL. GOV'T CODE §§ 65800-65912 (West Supp. 1980).

^{111.} Id. § 65850(a).

^{112.} Id. § 65803.

^{113. 1979} Cal. Legis. Serv., ch. 304, amending CAL. Gov'T Code § 65860.

^{114.} See notes 58-97 & accompanying text supra.

solar mandate, the possibility of a successful judicial challenge to the mandate implemented through zoning would be greatly reduced.

3. Favorable Features of Zoning

Several technical features of zoning make it an attractive method of implementing a solar mandate. First among these features is the variance. The variance is an administrative mechanism that would provide flexibility in the application of a mandate by permitting exceptions to the solar mandate if a homebuilder found that his/her home would be shaded much or all of the time and it would not be fair to the homeowner nor beneficial to the community to require the installation of a solar hot water system. The variance process is a standard feature of zoning law that provides for exactly this type of situation. California general law states that zoning variances may be granted "when, because of special circumstances applicable to the property, including size, shape, topography, location or surroundings, the strict application of the zoning ordinance deprives such property of privileges enjoyed by other property in the vicinity."115 Thus, the variance would be properly given to the homebuilder with inadequate sunlight due to the topography of the lot or the surrounding structures. The benefit enjoyed by property owners covered by the zoning mandate is that they will save money. This is assured since the city must first find that the solar mandate is cost effective as required by the Warren-Alquist Act116 before the mandate can be implemented.

The second established feature of zoning is the concept of a nonconforming use. The principle is that when a new zoning law is passed an existing use can continue despite being inconsistent with the new zoning law. The use continues as a legal nonconforming use.¹¹⁷ The nonconforming-use concept will act as a built-in mechanism to limit a solar mandate exclusively to new construction. Existing structures could be grandfathered and

^{115.} CAL. GOV'T CODE § 65906 (West Supp. 1980). Topanga Ass'n for a Scenic Community v. County of Los Angeles, 11 Cal. 3d 506, 522 P.2d 12, 113 Cal. Rptr. 836 (1974), construes this requirement strictly and demands that the variance authority make express findings to support the grant of a variance. In reviewing these findings, the court must find substantial evidence to support them or they will be overruled.

^{116.} See notes 36-56 & accompanying text supra; CAL. PUB. RES. CODE § 25402.1(f)(2) (West Supp. 1980).

^{117.} D. Hagman, Urban Planning and Land Development Control Law $\S\S$ 80-81 (1975).

would not be required to install solar hot water systems.118

A final advantage of using zoning to implement a solar mandate is that it permits targeting of a mandate to suitable areas. Zoning classifications are applied over defined areas of a city or county, taking into account both the characteristics of each area and the desired patterns of growth and development. If planning studies indicate that certain areas of a jurisdiction are not suitable for solar hot water systems, selective zoning could provide an easy device for targeting the coverage of a solar mandate.¹¹⁹

Given the above zoning features, zoning appears to be a feasible method for implementing a solar mandate. If a local government desires to apply a solar mandate selectively to particular parts of the city, overlay zones or PUD regulations may be an effective and readily available method for doing so.

III.

SOLAR ACCESS: THE RIGHT NOT TO BE SHADED

A solar mandate should be accompanied by some provisions to guarantee that the systems installed pursuant to the mandate will continue to receive sunlight. In the absence of such regulations, development is bound to shade some of the collectors, rendering

^{118.} A challenge could be raised to such a widespread nonconforming use because the exception would be applicable to an unusually large majority of the lots in the city. Those owners of lots on which new construction was planned could argue that the zoning ordinance implementing a mandate constitutes de facto spot zoning. Spot zoning is generally considered to be a misuse of zoning to favor or disadvantage certain lots, and CAL. GOV'T CODE § 65852 requires that zoning regulations be uniform. Nevertheless, the courts have not been very demanding in restricting spot zoning or in applying the uniformity requirement of § 65852. See, e.g., Wilkins v. City of San Bernardino, 29 Cal. 2d 332, 175 P.2d 542 (1946); Note, Spot Zoning as Use Control, 13 HASTINGS L.J. 390 (1962). The de facto spot zoning argument would most likely fail for two reasons. First, it may be hard to show that a solar hot water system requirement is a disadvantage and therefore it may not be possible to show any injury. Second, the notion of de facto zoning is novel and inconsistent with relevant case law (see, e.g., City of New Orleans v. Dukes, 427 U.S. 297 (1976) which upholds a New Orleans street vendor regulation despite a discriminatory "grandfather" clause). A ruling against the mandate would also be contrary to the state public policy that favors maximum utilization of solar energy. Both CAL. Gov'T Code § 65850.5 (West Supp. 1980) and Cal. Health & Safety Code § 17959 (West Supp. 1980) declare that "it is the policy of the state to promote and encourage the use of solar energy systems and to remove obstacles thereto."

^{119.} See Note, Obtaining Access to Solar Energy: Nuisance, Water Rights, and Zoning Administration, 45 BROOKLYN L. REV. 357 (1979). Though speaking in the context of solar access, the concept of specially targeted solar zones is presented by recommending three solar zones—mandatory solar, permissive solar, and unenforceable solar. Id. at 385.

them either useless or less effective. Thus, without solar access regulations, the mandate will have less impact on the demand for conventional energy, and the cost effectiveness for any particular solar hot water system will be reduced. The subject of solar access is complicated and a substantial amount of literature exists in this area. This article does not attempt to repeat the effort that this body of literature represents. Instead, only some essential elements of the solar access problem are presented. 120

A. Relevant California Law

California general law recognizes private arrangements to secure solar access and it includes and authorizes public regulations for the same purpose. California general law permits the creation of an easement for the right to receive sunlight.¹²¹ This "solar easement" is defined as the "right of receiving sunlight across real property of another."¹²² In authorizing local regulations the SMA provides that, subject to conditions, local governments may require subdividers to dedicate solar easements as a condition for approval of tentative subdivision maps.¹²³ State tax law provides that, should neighbors choose to negotiate among themselves for solar easements, the cost of the easement to the solar user may be

For divisions of land for which a tentative map is required pursuant to Section 66426, the legislative body of a city or county may by ordinance require, as a condition of the approval of a tentative map, the dedication of easements for the purpose of assuring that each parcel or unit in the subdivision for which approval is sought shall have the right to receive sunlight across adjacent parcels or units in the subdivision for which approval is sought for any solar energy system, provided that such ordinance contains all of the following:

^{120.} For an excellent and extensive analysis see Solar Access, note 102 supra.

^{121.} CAL. CIV. CODE § 801(18) (West Supp. 1980).

^{122.} Id. § 801.5.

^{123.} CAL. GOV'T CODE § 66475.3 (West Supp. 1980):

⁽¹⁾ Specifies the standards for determining the exact dimensions and locations of such easements.

⁽²⁾ Specifies any restrictions on vegetation, buildings and other objects which would obstruct the passage of sunlight through the easement.

⁽³⁾ Specifies the terms or conditions, if any, under which an easement may be revised or terminated.

⁽⁴⁾ Specifies that in establishing such easements consideration shall be given to feasibility, contour, configuration of the parcel to be divided, and cost, and that such easements shall not result in reducing allowable densities or the percentage of a lot which may be occupied by a building or a structure under applicable planning and zoning in force at the time such tentative map is filed.

⁽⁵⁾ Specifies that the ordinance is not applicable to condominium projects which consist of the subdivision of airspace in an existing building where no new structures are added.

included in the cost of the system for tax credit purposes.¹²⁴ State general law also declares in the Solar Shade Control Act¹²⁵ that once a solar collector has been installed, any shrub or tree will constitute a public nuisance if, thereafter, it grows to shade more than 10% of the collector between 10 AM and 2 PM.¹²⁶ However, a jurisdiction may declare itself exempt from the Shade Control Act by adopting an ordinance to that effect.¹²⁷

The importance of these laws differs. The most significant is the provision in the SMA giving cities and counties the power to require dedication of solar easements as a condition of subdivision tentative map approval—but recall that tentative maps are only required for subdivisions with five or more parcels. 128 The Shade Control Act allows trees that shade the collector at the time of the installation of the collector to continue to grow unregulated. Even if such a tree should die, it can be replaced and the new tree will not be subject to the Shade Control Act. 129 The ability to negotiate with neighbors for a solar easement, though an important right, is generally recognized as a relatively inconsequential gesture toward meaningful solar access law and is therefore the least significant of the access provisions in California general law. 130 The transaction costs are too high—especially in situations in which the cost effectiveness of the system is marginal in the first place.

B. What Can Be Done by the Local Jurisdiction

In line with general law, the least that a city of county should do to provide for solar access while passing a mandate is to pass an ordinance requiring: 1) access provisions in any PUD district, and 2) dedication of easements for solar access as a condition of tentative subdivision map approval. Language should be contained in these ordinances to exempt construction wherein solar hot water systems would not be practical because of unavoidable shading.

^{124.} CAL. REV. & TAX CODE § 17052.5(a)(6) (West Supp. 1980).

^{125.} CAL. PUB. RES. CODE §§ 25980-25986 (West Supp. 1980).

^{126.} Id. § 25982.

^{127.} Id. § 25985.

^{128.} See note 65 supra.

^{129.} CAL. PUB. RES. CODE § 25984 (West Supp. 1980). Note that the Solar Shade Control Act is directed only to trees and shrubs, not to neighboring construction.

^{130.} See, e.g., Kett, New Mexico's Solar Rights Act: The Meaning of the Statute, 1 Solar L. Rep. 737, 740 (1979); Miller, Legal Obstacles to Decentralized Solar Energy Technologies, 1 Solar L. Rep. 595, 603 (1979).

There should not be any significant legal difficulty in passing and enforcing a solar access ordinance.

Beyond these somewhat straightforward steps, solar access can be difficult to secure. In attempting to guarantee solar access for new construction in existing neighborhoods, a very difficult balance must be struck between the recognized need to protect the solar user's right to meaningful use of his solar hot water system and the neighboring homeowners' rights to use their property in a reasonably unrestrained fashion. In many communities, the existing height limitations and setback requirements may be adequate to protect solar access. Indeed, the fact that most solar hot water systems today are being purchased by relatively affluent homeowners who might tend to live in neighborhoods with such accidental solar access zoning may account in part for the apparent infrequency of solar access problems. In those communities the threat to solar access primarily comes from a liberal variance process.¹³¹ An ordinance which requires that substantial weight be given to the effect of a variance on a neighbor's solar hot water system, or that damages be available to the injured solar user if a variance leads to shading of a collector, would substantially alleviate that threat.

In trying to prevent the solar user from losing his solar exposure because of construction on adjacent lots, the constitutional ban on taking of property without just compensation¹³² becomes a factor. A major difference between a regulation to ensure solar access and other land use regulations is the lack of symmetry in benefits and burdens that is likely to result from a solar access regulation. The owner of the property using a solar collector is benefitted and the owner of the adjacent property is restricted from using his property in any way that would interfere with that benefit. Nevertheless, as long as the present use of the neighboring property is not impaired and the public policy support for solar energy continues, it is likely that the courts would find a reasonably drafted regulation does not constitute a taking. 133 Findings compiled by the local government that the regulation is designed to further the public purpose of reducing the demand on fossil fuels would strengthen the defense against any suit calling the regulation a taking. If the regulation was supported by an energy element in a

^{131.} See Solar Access, supra note 102, at 45.

^{132.} U.S. Const., amend. V.

^{133.} See Penn Central Transp. Co. v. New York City, 438 U.S. 104 (1978); SOLAR ACCESS, supra note 102, at 34-35.

general plan, the findings would be insulated from a judicial determination that they were not supported by substantial evidence. Regulations are almost never struck down as an unconstitutional taking of property.

Zoning for solar access can result in exclusionary regulations that defeat the goal of energy conservation by exacerbating urban sprawl and produce other effects that are counterproductive to social and economic values. Such negative effects would not be the result of good-faith zoning for solar access—indeed one of the advantages of the PUD as a zoning device is that densities can be increased in parts of the district to provide open space in other parts, thereby insuring solar access within the development without reducing density. Though not directly applicable, the SMA, in requiring that a subdivision for which a tentative map is required provide for future passive or natural heating or cooling opportunities, states that "such provision shall not result in reducing allowable densities or the percentage of a lot which may be occupied by a building or structures."134 As indicated in the SMA, it is not the policy of the state to use solar energy encouragement as an excuse for exclusionary zoning or downzoning. Energy conservation is better served by increased densities.

Two techniques for ensuring access to sunlight are envelope zoning and prior appropriation and beneficial use ordinances. The envelope zoning concept has been supported by the Environmental Law Institute¹³⁵ and is currently being studied for possible use in Los Angeles by the University of Southern California School of Architecture. The basic concept is to establish a hypothetical trapezoidal box covering the property. This trapezoid is low on the north side and high on the south with a sloped plain between the two ends. No structure or vegetation would be permitted to penetrate beyond the edges of this hypothetical trapezoid. See figure I.

^{134.} CAL. GOV'T CODE § 66473.1 (West Supp. 1980).

^{135.} See SOLAR ACCESS, supra note 102, at 51-69.

^{136.} Merl, Solar-Rights Zoning Study to be Made, Los Angeles Times, Aug. 8, 1979, § 1, at 15, col. 1. See also, Knowles, Solar Access and Urban Form, 69 Am. INST. ARCH. J. 42 (1980).

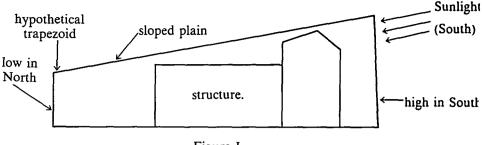


Figure I

Prior appropriation and beneficial use ordinances are based upon western United States water law and essentially adopt the water law premise that the first to appropriate for a beneficial use will have priority over all subsequent users.¹³⁷ There are many variations on these two techniques and there are many alternate strategies for guaranteeing solar access. The local government should look to the local conditions to determine which technique is most suitable for it.

IV. LIABILITY

California has a unique wrinkle in its law of governmental liability. The state has consented, for itself and for local governments, to suits for failing to perform mandatory duties imposed by an enactment. Suits are only permissible when the injury caused by the failure is the kind of injury the enactment was designed to protect against.¹³⁸ Thus, if a city or county fails to perform some duty that is required by statute, the person injured by that failure can sue for damages.

The definition of "mandatory" is specifically limited and does not include any damages that result from the issuance, or failure to issue a permit. 139 But in *Morris v. County of Marin*, 140 the court declared that this limitation did not mean that the Legislature intended to exempt local governments from all liability flowing from the issuance of permits. *Morris* held that the County of Marin could be held liable for injuries to a workman when the county

^{137.} For a good discussion of the merits of this form of solar access regulation, see Kerr, New Mexico's Solar Rights Act: The Meaning of the Statute, note 130 supra; Hillhouse & Hillhouse, New Mexico's Solar Rights Act: A Cloud Over Solar Rights, 1 SOLAR L. REP. 751 (1979).

^{138.} CAL. GOV'T CODE § 815.6 (West 1966).

^{139.} Id. § 818.4.

^{140. 18} Cal. 3d 901, 559 P.2d 606, 136 Cal. Rptr. 251 (1977).

failed to ensure that the recipient of a building permit possessed adequate workman's compensation coverage as required by the California Labor Code. 141

A subsequent case, Young v. City of Inglewood, 142 held that there was no governmental immunity from suit for a city that issued a permit to an unlicensed contractor. The Business and Professional Code requires, as a precondition to the issuance of a construction permit, that the city verify that the contractor is licensed.143 The court found the city liable for the shoddy workmanship that followed: "Here we deal with a failure by the city to comply with another mandatory precondition for the issuance of a building permit. The result must be the same as in Morris."144

California has a licensing process for solar contractors. In order to install solar equipment a contractor must have the SC-44 license. 145 To obtain the SC-44 Supplemental Solar License a prospective solar contractor must already possess a primary classification license. Any one of six primary licenses can be combined with the SC-44 supplemental license to permit the contractor to perform, depending upon the primary license, some or all types of solar installations. For solar hot water installations either a class B general building contractor's license or a class C-36 plumbing contractor's license is required in addition to the SC-44.146 No solar installation experience or exam is required for the SC-44 supplemental license.

After October 1, 1979, every contractor installing solar equipment is required to have an SC-44 license. Therefore, after October 1, 1979, every city issuing a building permit for a solar installation must determine that the contractor has an SC-44 license or face liability for any damage that may occur due to a faulty installation. To the extent that many installations are being performed by unlicensed contractors and to the extent that the city inspectors are not familiar enough with solar installations to be able to spot obvious installation errors, the increase in solar instal-

^{141.} CAL. LAB. CODE § 3800 (West 1971).

^{142. 92} Cal. App. 3d 437, 154 Cal. Rptr. 724 (1979).

^{143.} CAL. BUS. & PROF. CODE § 7031.5 (West Supp. 1980).

^{144. 92} Cal. App. 3d 437, 440 (1979).

^{145.} See Letter from Kathryn Ramsey (California Dept. of Consumer Affairs) to California Contractors concerning Supplemental Solar License SC-44 (Dec. 1, 1979) [hereinafter cited as Letter]; Solar License SC-44, SUNUP: ENERGY NEWS DIG., Oct. 1979, at 1.

^{146.} See Letter, note 145 supra.

lation that would result from a solar mandate ordinance is likely to cause problems. Whether this is actually a problem is not clear.

V.

The power of a city or county to mandate can be exerted in several forms. By mandating via the building code, all new construction in the city is reached. By requiring solar hot water systems as a condition for subdivision map approval only subdivisions are reached. Further, for counties or general law cities the use of subdivision controls are mandatory only for subdivisions of five or more parcels. Zoning remains an attractive method of mandating since particular areas of a city can be targeted.

Regardless of the technique for mandating, some provisions should be made to ensure solar access for the affected lots. This is relatively simple for large subdivisions but becomes increasingly difficult for undeveloped lots in existing communities.

The only risk of liability that a city or county may face in mandating is already present in the licensing of contractors for voluntary solar installations. By mandating, the increase in the absolute number of solar hot water systems to be installed will increase the likelihood that a local government will be faced with a claim for damages. This risk is further heightened by the unfamiliarity city officials will have with the solar field.