

# Sunshine Laws

## Legal Rights to Solar Access

### Task Force on Solar Law

*The North Carolina Energy Policy Act of 1975 created the Energy Policy Council to advise the Governor and the General Assembly on matters of energy policy. In 1981, the Council recommended to the Governor that he name a Task Force on Solar Law to determine the nature of the legal and institutional barriers to the full development of solar energy in North Carolina. In April 1982, the Governor appointed a task force of twelve regular members and nine advisory members selected from agencies and institutions of state government. The final report of the task force was published in January 1984. It includes recommendations dealing with electric utilities, financing solar energy development, and solar access. The task force's findings and recommendations regarding solar access are presented in the following article.*

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The use of solar energy for water and space heating is increasing rapidly in North Carolina. With over 3000 passive solar homes, 2000 domestic solar water-heating systems and 300 active solar space-heating systems now in place, preserving solar access promises to be an issue of great importance for local land use planning.

Increasing the development and use of solar energy systems requires legal assurance of adequate sunlight. Solar energy systems must be exposed to direct sunlight to function well. However, access to the sun is easily blocked by shadowing from neighboring buildings and vegetation. Both the position of the sun and the topography affect the length and direction of shadows and, thereby, the amount of sunlight which reaches the solar collectors.

North Carolina law does not recognize rights to direct sunlight when light is blocked by vegetation or structures on others' property. As a result, potential solar users cannot be guaranteed that their systems will continue to function efficiently or prove a viable, long-term investment. Systems may be rendered inoperable by the actions of others beyond their control. This article offers several remedies for this problem. They include new legislation to allow solar access protection through private covenants and easements, local government maintenance of street trees and other publicly controlled property, and local building and land use regulation.

### FUNDAMENTAL CONCEPTS

An understanding of certain fundamental concepts related to solar access is required to appreciate

the need for solar rights guarantees.

The position of the sun in the sky changes daily and seasonally due to the earth's rotation and its revolution around the sun. This changing position has an effect on the amount of available radiation and the angle at which the sun strikes the earth's surface. This information is critical in siting solar collectors. Shadows cast by nearby vegetation or structures must be carefully measured to insure maximum effectiveness of the collectors. Topography also affects the amount and angle of the sun's radiation on the collectors. As the direction and degree of the land's slope change, so does the angle at which the sun strikes the land.

While the position of the sun and topography determine shadow directions and lengths, it is the shadows themselves that are vital to solar access. The length of a shadow cast on a solar collector depends upon the altitude of the sun, the slope of the ground in the direction of the shadow and the height of the object (structure or vegetation) casting a shadow. The lower the altitude of the sun, the longer the shadow; the higher the vegetation or structure, the longer the shadow. The altitude of the sun at different seasons should be taken into account as a fixed parameter when siting and designing solar energy systems.

Shadows from buildings and vegetation should be carefully considered in the site design of solar collectors. Currently, in North Carolina, solar energy users cannot design their systems to take account of future shadows or obstructions which may interfere with their energy systems. Building height restrictions are the only established means of protecting

solar access preservation

shadow directions and lengths

solar access. In this article, a number of legal tools are offered to assist the use and growth of solar technology in the state. It is hoped that these techniques and strategies will provide communities throughout North Carolina with a strong basis for instituting solar access legislation.

## LEGAL APPROACHES TO PROTECTING SOLAR ACCESS

In the Governor's Task Force Report, nine criteria were used to evaluate the viability of solar access strategies. These included:

- (1) *Protection of appropriate amounts of solar access.* Solar access laws should allow factors such as topography, height, bulk, and location of structures and vegetation, climate, and orientation of streets and structures to be taken into account so that neither too little nor too much access is obtained.
- (2) *Clear and fair allocation of costs and benefits.* An access law should not result in unfair gains or losses to individuals or governments through removing or pruning vegetation blocking solar access. Costs of administration should be kept low. Solar access should be available to all building occupants regardless of size or ownership.
- (3) *Compatibility with other policies and laws and with actual conditions in the physical environment.* Solar access provisions should be compatible with existing laws, regulations, land use patterns, and local development plans. In addition, solar access protection should recognize variation in actual physical conditions such as topography. Access regulations should not conflict unduly with other goals such as growth in the real property tax base and the desire of people to live in affordable housing.
- (4) *Adequate notice.* A solar access law should be clear and concise. Solar access is inherently complex. To fully consider the implications and ramifications of solar law, public notice requirements should be established to insure maximum public input.
- (5) *Political acceptability.* Solar access laws must be sensitive to the concerns of the citizenry. In particular, solar access laws should allow recognition of preferences for attractive, tree-shaded neighborhoods. People should not feel that their traditional rights are being violated.
- (6) *Flexibility.* Laws adopted to protect solar access should be adaptable to changing societal needs and to changes in solar technology. They should be subject to modification or ter-

mination when they are no longer in the public interest. For example, solar access laws should not freeze nor lock in a particular pattern of urban development. In addition, local governments should have the discretion to adapt solar protection techniques and standards to fit their own needs.

- (7) *Compensation for lost access protection.* Because solar energy systems require a sizeable investment, individuals need some security that they will not suffer financial losses if solar access protection is removed and shading occurs.
- (8) *Ease of implementation and timeliness.* Implementation of an access law should be possible with existing agencies and institutions; it should not require the formation of new agencies or large increases in administrative staff. New legislation to protect solar access should be suitable for immediate implementation. Solar access laws should clearly define rights and duties so as to minimize future disputes.
- (9) *Protection of future access.* Solar access laws should make it possible for communities to safeguard future solar access by prohibiting present actions, such as planting trees on north lot lines, which will adversely affect solar access in the future.

political sensitivity

local adaptability

It is unlikely that any single means of solar access protection will comply with all of these criteria. Instead, these goals provide a base from which to compare alternative solar design strategies. Appropriate and feasible alternatives provide a context for meaningful public debate and, ideally, a foundation for secure solar protection standards.

### Prior Appropriation

The New Mexico Solar Rights Act of 1977 uses the western United States doctrines of "beneficial use" and "prior appropriation" to govern solar property rights. The prior appropriation doctrine is rooted in the principle of "first in time is first in right". As applied to water rights, a person obtains a vested right to use a particular amount of water by diverting it from a navigable watercourse and applying it to a beneficial purpose within a reasonable amount of time. The user then has a right to continue to divert that amount of water; this precludes upstream users from consuming so much water that the prior appropriation cannot be filled. The New Mexico law applies this doctrine to solar energy. It states that solar energy is a property right which may be recorded and transferred and that this right is protected by the prior appropriation doctrine.



### Solar Collector Recordation

The Environmental Law Institute has proposed an approach—involving the recordation of solar collectors—which is not rooted in water law. With this method of protection, people seeking solar energy protection would apply for permission to record their collector with the local government. If permission were granted after a public hearing, the law would protect the collector from unreasonable shading. The city or town could not issue development permits which would result in the shading of the protected collector and, after the recordation, neighbors would have to keep vegetation from obscuring the solar access (in the case of preexisting vegetation, the solar owner would have to reimburse the neighbor for the cost of keeping the vegetation trimmed). In the model legislation proposed by the Environmental Law Institute, a city or town could repurchase the rights granted by solar collector recordation if it decided to allow development that would shade a protected collector.

Solar collector recordation has two shortcomings. First, it is very difficult to integrate with local comprehensive planning. The first-come-first-served nature of the approach means development patterns are determined arbitrarily, with the first person to establish a solar right limiting the development potential of surrounding property. Second, the approach places a heavy burden on local government, which must establish a system for keeping track of solar rights and must review every building and development permit in terms of its potential to in-

fringe on the solar rights granted to neighboring property.

### Public Nuisance Law

The public nuisance law approach to protecting solar access is direct and simple. Most states have provisions for the abatement of public nuisances which have been variously defined to include acts ranging from prostitution to allowing ragweed plants to grow on one's property. Given the wide range of public benefits the courts have held to be within the police power of the state, there is little doubt that North Carolina could protect solar access by declaring the shading of a solar collector to be a public nuisance. Nevertheless, this approach also has shortcomings. They are severe enough to suggest that the use of public nuisance law to protect solar access would create more problems than it would solve. For example:

- (1) Lawsuits would be necessary in each individual case to prove the existence of a nuisance.
- (2) There would be no security for collector owners until after they install a collector and win a nuisance suit; if one sues before installing a collector, the suit would be dismissed as not "ripe."
- (3) Since a public nuisance is a crime, the state, rather than an aggrieved property owner, is typically the plaintiff. Therefore, a homeowner may have to wait for the state to sue.
- (4) There is no provision for compensation of owners of restricted property, even though their loss may in some circumstances be greater than the gain achieved by the owners of protected solar collectors.

### Eminent Domain

"Eminent domain" is defined as the taking of private property for a public use without the owner's consent. The state has this right and local governments may be granted such a right. Under this option, the neighboring landowner's skyspace would be condemned by the authority to provide access to an adjoining solar system; no vegetation nor structures could be placed in this area. The major problem with this option is whether solar access could be so strictly defined as a "public purpose" warranting such drastic action. Setting a price for the condemned area would also be difficult. This process would be excessively burdensome on the local authorities and the affected neighbor.

Undue development restrictions could be placed on non-solar property owners. In a dramatic example of this problem, it is possible that no vegetation would be allowed on the neighbors property if the

solar system were located downhill from the condemned space. Furthermore, such condemnation practices would likely work against the benefits of solar technology in the public's eye.

### Private Nuisance Law

At first glance, private nuisance law appears to be an ideal way to protect solar access, since it is usually defined as an interference with the use and enjoyment of land. However, the interference must be substantial in order to create a basis for a nuisance action. In addition, the interference must be one that would affect a normal person in the community rather than one who is hypersensitive to the particular action. Although the loss of solar access would be a "substantial loss," a court may rule that the solar user is *hypersensitive* by virtue of his/her atypical energy demands relative to the general community. In fact, in most jurisdictions a building or structure cannot be complained of as a nuisance merely because it interferes with the passage of light and air. Of course, now that solar energy systems are becoming more common and, given the national interest served by energy conservation, rulings may change.

Private nuisance law is an unproven approach to solar access protection. Although court interpretations may change, there is no assurance that this will be an effective means of protecting solar access in North Carolina. Solar users need greater certainty that their investments will not be lost because of shading by structures or vegetation on nearby property. As Prosser (1971) observed, "[t]here is perhaps no more impenetrable jungle in the entire law than that which surrounds the word 'nuisance.' When there are alternative routes open, it makes little sense to try to hack a clear path through this jungle."

### Zoning and Planning

The zoning and planning activities of local government offer many possibilities for protecting solar access. First, if a city or town has a comprehensive plan, proposals for solar development could be included at the outset. This could assure appropriate levels and methods of solar access in particular areas of the community. In the case of zoning practice, the public purpose of regulations and the uniformity of the overall plan must be considered. If solar access denotes a public purpose, then any lack of uniformity which results from solar access should be allowed. Designated areas could be open to access protection while others might require permits or easements. Existing neighborhoods would demand careful attention so as to minimize the threat of a "taking" of property rights.

Solar access through zoning works well in Planned Unit Developments (PUDs). PUDs can readily accommodate varying setbacks and building heights essential to proper solar access. In most cases, solar access can be provided with only minor site plan alterations.

Special Use Permits are another effective means of protecting solar access. Zoning and special use permits are among the most useful of all solar protection strategies. Both have been upheld by the courts as viable and legitimate uses of municipal powers.

### Subdivision Regulations

The subdivision ordinance is designed to govern the conversion of raw land into building sites for residential and other purposes. Typical subdivision regulations establish requirements for the design of streets, lots, and open spaces and set minimum standards for subdivision improvements (such as streets, utilities, drainage facilities, etc.) that must be furnished by the subdivider. Similarly these regulations often require the subdivider to establish easements for drainage ways, utility lines, and other purposes.

Subdivision ordinances are often overlooked as a means of protecting solar access. The review of subdivision plats may, however, provide a special

zoning and special use permits



subdivision regulations

opportunity for a city or county to influence the orientation of lots and buildings to the sun. Even the simplest subdivision regulations will influence the location, length, and orientation of a subdivision's streets. In turn, the location and orientation of streets affect the orientation, shape, and size of platted lots and the placement and orientation of buildings on those lots.

Subdivision regulations often establish minimum lot sizes (incorporated from the zoning ordinance) and minimum street rights-of-ways. Lot sizes and street widths indirectly affect solar access by establishing setback distances between buildings. The placement of houses on a group of lots determines whether one building encroaches onto another's "solar collection field". With controlled siting and careful placement of structures, solar access can be achieved even in a group of lots with only 100-foot frontages.

The primary advantage of subdivision regulations is their ability to guide the development of large tracts of land which are maintained in single ownership. The subdivision review process can focus public attention on an area-wide solar plan. Regulations, moreover, tend to be more effective if applied to a single developer or subdivider than individual property owners.

The design phase of a subdivision is an ideal point for solar access intervention. The developer can most easily consider solar issues in the context of restrictive covenants or easements during his/her preliminary negotiations with the town. In some cities, subdivision regulations include requirements for solar easements or protective covenants as a condition of plat approval.

### Covenants

A restrictive covenant is described as a "mutual promise" made between members of a neighborhood or specific subdivision. These promises attach to and run with the land, thereby binding subsequent purchasers. Many covenants have been made which actually prevent solar systems from being installed, such as height restrictions, appearance codes, or setback requirements. On the other hand, several states have passed legislation that specifically prohibits covenants which restrict solar energy use. Many have realized good results. The Task Force recommends this method of solar access protection along with enhanced subdivision regulations.

### Easements

Easements have been described as a desirable means of solar protection. Many architects, developers and elected officials favor this approach. Easements are not without their limitations, however.

Neighbors often feel uneasy about giving away, renting or selling airspace above their property. The sale or lease of airspace remains a confusing concept for many property owners. A properly prepared solar easement, therefore, should include a specific description of the area to be assessed and should alleviate any conceptual issues associated with the transfer of such non-traditional property rights.

## RECOMMENDATIONS

Based on the preceding analysis, the Governor's Task Force on Solar Law made six recommendations regarding solar access and land use.

1. Solar easements should be encouraged as an appropriate means of securing solar access. To this end, legislation should be adopted which sets forth the standards for drafting and the means for recording such instruments.
2. The Governor should invite the Energy Division of the Department of Commerce, the Alternative Energy Corporation, the North Carolina Bar Association, the Institute of Government and other legal and administrative organizations in the state to develop, either individually or cooperatively, model solar easements, covenants and ordinances which could be used in a variety of geographical and social circumstances.
3. By legislative action, any deed, restriction, or covenant that has the effect of prohibiting solar energy systems from being utilized should be deemed contrary to public policy and declared void and unenforceable, except those pertaining to conservation and preservation agreements.
4. Cities and counties should be authorized to encourage energy conservation and the use of solar energy, and to protect solar access in land use regulations through the use of zoning ordinance provisions, special use permits, incentives for developers, and requirements for subdivision approval.
5. Through the North Carolina Association of Homebuilders and similar organizations, the Governor should encourage developers to provide solar access by proper orientation of lots and buildings to the sun, and by establishing restrictive covenants or easements for use by the purchasers.
6. Cities and counties should be given the authority to maintain public vegetation in such a way as to provide solar access.

Specific means of accomplishing these recommendations are detailed in the *Report of the Governor's Task Force on Solar Law*. □

new solar legislation