



California County Planning Directors Association

Solar Energy Facility Permit Streamlining Guide



February 3, 2012

<http://www.ccpda.org>

Participants in the Development of this Guide

A document this complex and comprehensive was the work of many, many people from a variety of backgrounds, areas of expertise, positions, skills, interests and abilities. It also reflects the wonder of California's diversity with the representation of individuals from local (all CA counties via CCPDA) and state government (OPR, CEC), CSAC, environmental groups, state farm bureau, small and large scale solar, contractors, consultants and many others. Within the larger group, there was a core that drafted documents, responded to comments, met and reviewed to refine it into its final form.

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I. Introduction

A. Background

California is moving beyond a green energy vision to a green energy reality, and is leading the nation in developing Solar Energy Facilities (SEFs). The benefits of a transition to solar energy are many. The central goals are to substantially:

- Reduce reliance on foreign petroleum supplies.
- Provide a hedge against natural gas price volatility.
- Stimulate local economic development and job creation amidst struggling local and world economies.
- Reduce the emissions of toxic air contaminants and greenhouse gases.

California law requires that, by 2020, one-third of the State's electricity come from renewable energy sources. The timely expansion of solar energy is a key part of the solution. With worldwide competition for solar technology deployment, the solar industry is rapidly evolving to meet an expanding market demand.

The solar energy market is experiencing unprecedented growth in California. Governor Brown envisions 12,000 megawatts (MW) of energy produced from localized distributed electricity generation and 8,000 MW of large-scale renewable projects throughout the State. This vision has been accompanied by ongoing investment in renewable energy and excitement over how best to accomplish this goal. On average, one MW of solar energy production requires approximately six acres of land and can provide electricity for around 750 homes.

In California, many of the permit applications are for development of SEFs located in rural areas, and potentially involve agricultural lands and wildlife habitat. In light of the growing number of applications, members of the California County Planning Directors' Association (CCPDA) surveyed county regulations of SEFs. The degree of regulation varied among jurisdictions, and in some cases there was a complete absence of zoning that would permit utility-scale facilities. Since the mission of



CCPDA is to coordinate California county planning programs and to create consistency where possible, the CCPDA Executive Committee agreed to assemble interested parties and draft a Model SEF Ordinance for consideration by all California counties.

The California State Association of Counties (CSAC) staff then assisted in bringing interested parties together. Participants in this Working Group included representatives from county planning, CSAC, State agency staff (Governor's Office of Planning and Research, California Energy Commission (CEC), California Department of Forestry and Fire Protection, and others), the solar industry, the California Farm Bureau, environmental organizations, consultants, Sonoma State University's Center for Sustainable Communities and others. The Working Group identified 31 issues to be addressed by the Model SEF Permit Streamlining Ordinance (Model Ordinance) and a companion Model SEF Permit Streamlining Guide (Guide).

USER GUIDE: How is this material organized?

- The **Model SEF Permit Streamlining Guide** is intended to assist local agencies in facilitating the appropriate development of Tier 1-3 facilities as well as large-scale or utility-scale solar facilities (Tier 4).
 - The **Introduction** (Section I) provides background information regarding the development of the Model SEF Permit Streamlining Ordinance and Model SEF Permit Streamlining Guide.
 - The remainder of the **Guide** (Section II) focuses on challenges and policy options pertaining to the permit process for SEFs. It is intended to provide a range of potential standards and practices applicable to varying circumstances throughout California.
- The **Model SEF Permit Streamlining Ordinance** (Appendix A to this Guide) focuses on projects and permit thresholds that qualify smaller SEFs (Tiers 1, 2, and 3) for streamlined permit processing. The Model Ordinance includes descriptions of the characteristics of each tier (see Table 1, Appendix A).
- The **Model Renewable Energy Combining Zone** (Appendix B to this Guide) would expedite larger SEFs (Tier 4).

B. The Challenge

In preparing the Model Ordinance and Guide, the Working Group focused on the following questions.

How can California counties:

- Incentivize and facilitate the rapid expansion of SEFs, and
- Simultaneously protect important agricultural lands and wildlife habitat areas?

How can applicants for SEFs:

- Obtain timely and cost-effective authorization for their projects, and
- Comply with changing market conditions as well as a complex web of local and State regulatory requirements?

Four key issues were raised, centered on concerns from representatives of the agricultural, environmental, planning, and solar industry stakeholders, and each is summarized below. These issues may not arise on all projects and the potential importance of each issue could vary depending on project size and location.

1. **Loss of Agricultural Land:** The main concerns related to loss of agricultural lands were primarily focused on facilities located on Important Farmland mapped as Prime Farmland, Farmland of Statewide Importance and Unique Farmland by the State Farmland Mapping and Monitoring Program. Additional concerns were expressed regarding the ability to build large-scale facilities unrelated to agricultural operations on lands under a Land Conservation Act (Williamson Act) contract. Some were also concerned that the installation of SEFs on or adjacent to active farmlands would adversely impact the ability of the farmer to operate their farm and eventually compromise agricultural production. At the same time, some were concerned that SEFs should not be burdened with mitigation obligations that do not apply to other large-scale residential and industrial development impacting agricultural land.



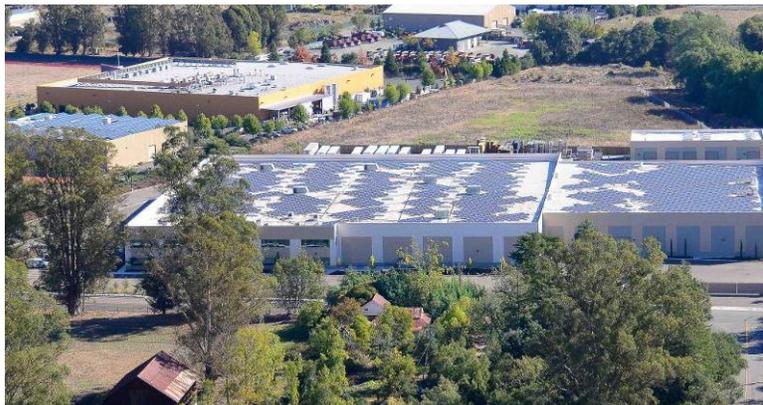
2. **Environmental Impact:** Issues related to the environment centered on concerns that proposed SEF development in certain areas could adversely affect sensitive environmental habitats. Some also expressed concerns that habitats of special status species — including the habitat of threatened, endangered, or rare species, Environmentally Sensitive Habitat Areas, important

habitat/wildlife linkages or areas of connectivity, conserved lands, and areas covered by Habitat Conservation Plans or Natural Community Conservation Plans — would be adversely affected.



3. **Abandonment and Restoration:** There was some concern that large SEFs could eventually be abandoned and become potential nuisances or eyesores. Planners, the solar industry and other representatives discussed whether requirements were needed for decommissioning, site restoration and posting financial assurances, and expressed general concerns about the administrative process for determining when an SEF has been abandoned.
4. **Additional Regulatory Burdens:** Others expressed concerns that an ordinance or guidance document with new permitting requirements and financial assurances will create further burdens on both the industry and utility customers who ultimately bear these costs, rather than streamlining an often lengthy and unpredictable permit process. Some believe that State law provides sufficient protections, and any additional regulations or requirements are justified only in exchange for incentives such as expedited processing.

After much discussion, there was a consensus among most in attendance to refocus the ordinance around regulations that would qualify SEF projects for more expedited permit processing and separate the Working Group's efforts into two documents. First, the Model Ordinance includes standards for smaller projects



(generally under 20 acres in size) that can be approved administratively through either a zoning clearance or minor use permit (Tiers 1, 2, and 3). Second, the Guide was prepared to include information applicable to large-scale projects (Tier 4) that are permitted by local agencies (not those licensed by the CEC) and provides related information to local governments and others interested in the permitting process for projects of all sizes.

C. Structure of the Model Ordinance

Appendix A presents the Model Ordinance and Appendix B presents the Renewable Energy Combining Zone. Each is described below.

The **Model Ordinance** (presented in Appendix A) was written specifically to address smaller projects in Tiers 1, 2 or 3. Its overarching goal is to incentivize smaller SEF projects that largely avoid or minimize significant impacts on the local environment by qualifying them for a streamlined permit process.

The Model Ordinance also encourages the siting of SEFs in areas where there is existing or planned electrical infrastructure (capacity in substations, transmission lines, etc.) and/or where there are marginal soils with no or limited habitat or biological issues. Overall, the Model Ordinance seeks to simplify, to the greatest extent possible, the permit process for well sited projects.

- Tier 4 facilities are generally larger in scale and the Model Ordinance requires a conditional use permit for these larger utility scale facilities in certain zones and provides a Model Renewable Energy Combining Zone with development standards to enable expedited permitting in specifically designated areas. The key issues and policy options for Tier 4 facilities are addressed in this Guide.

The Model Ordinance is divided into the following sections:

- **Section 1: Definitions.** This section clarifies various terms used in the Model Ordinance.
- **Section 2: Purpose.** This section establishes the objectives of the Model Ordinance to enable and facilitate SEFs while balancing other concerns. It helps all stakeholders to better understand the policy framework of the Model Ordinance and its goals and objectives. The Purpose section of an ordinance is generally used to make interpretations of local codes and guide decision-making and findings of consistency.
- **Section 3: Applicability.** This section explains that the Model Ordinance applies to newly proposed Tier 1, 2, and 3 SEFs, except for SEFs installed prior to the adoption of the Model Ordinance (Appendix A).
- **Section 4: Permit Requirements.** Permit requirements are defined in a table format for ease of reference using threshold levels, or “tiers,” to define the type of permit(s) required. There are four tiers (Appendix A - Table 1), which refer to requirements for building permits (Tier 1), administrative permits (Tier 2), minor use permits (Tier 3) and conditional use permits (Tier 4). Building permits and administrative permits are ministerial permits issued at a county staff level based on whether the SEF meets particular standards. Ministerial permits generally have requirements at a scale that is compatible with the

primary use or purpose of a zone in all circumstances. Use permits, on the other hand, are discretionary permits that require environmental review and an opportunity for a public hearing before the decision-making body. Conditions are generally added to ensure the use is compatible with the surrounding land uses and potential environmental impacts are mitigated. Minor use permits are generally approved at the administrative level, either by county staff or a zoning administrator. Conditional use permits generally require a decision by a hearing body, such as the Planning Commission. Use permits provide an opportunity to allow a use that might not otherwise be considered compatible in a particular zone.

- **Section 5: Parcel Line Setbacks.** This section proposes setbacks for SEF Tiers 1-3 based upon the zone.
- **Section 6: Height Limits.** This section proposes height limits for rooftop and ground mounted SEFs in Tiers 1-3 depending on the zone.
- **Section 7: General Requirements.** This section provides suggested development standards that apply to Tiers 1, 2, and 3 for building permits, Right to Farm Notices, floodplains, agricultural buffers and disclosures, visibility, enforcement for abandonment and other generally applicable provisions. This section is intended as a guide towards development of consistent standards and practices, while recognizing that each county may need to vary these standards as appropriate for the diversity of landscapes and local norms.
- **Sections 8 to 11: SEFs Tiers 1 to 4:** Tier 1, 2, 3, and 4 facilities are described in Sections 8, 9, 10, and 11, respectively. These sections include the general development standards for each Tier.

The Model Ordinance also includes a model for a **Renewable Energy Combining Zone** (Appendix B) with supporting Development Standards to provide an expedited permit process for larger scale SEFs in designated areas.

The Renewable Energy Combining Zone is proposed to allow a local jurisdiction to be strategic in designating areas where utility-scale renewable energy facilities, including SEFs, should be encouraged across a range of zoning districts while also addressing issues of compatibility and potential impacts. A Renewable Energy Combining Zone can be applied in conjunction with another base zoning district to either enable or restrict certain land uses or apply certain siting criteria or development standards.

A Renewable Energy Combining Zone incentivizes renewable energy projects by designating appropriate areas where such facilities are permitted with expedited California Environmental Quality Act (CEQA) review and a ministerial or minor

use permit approval process at the project level. Establishment of Renewable Energy Combining Zones should be based on “Smart from the Start” principles.¹

A Renewable Energy Combining Zone also contains standards that mitigate potentially significant impacts, such as the conversion of important agricultural lands or other potentially sensitive areas, while facilitating the siting of solar projects by only designating the portions of agricultural or resource zones that are most feasible for rapid deployment of solar facilities, while preserving other agricultural and resource areas from widespread conversion. In this way, the Renewable Energy Combining Zone approach serves to address cumulative impacts related to adoption of ordinances permitting utility-scale SEFs in sensitive resources areas, and reduces or possibly avoids the need for extensive environmental review for conforming projects.

While evaluation of the proximity and available capacity of existing or planned electric substations and transmission lines is time consuming and difficult to determine with certainty, local jurisdictions should use this information to determine the appropriate areas for applying a Renewable Energy Combining Zone. Other factors to consider include the topography of the land area, shading, vegetation and climate, such as the amount of solar radiation, cloud cover or fog.



¹ “Smart from the Start” renewable energy projects are sited on land that has already been developed or disturbed, and/or on land with low value for agriculture and biotic resources; are constructed with minimal impacts to cultural or archaeological resources; and are near existing or planned transmission lines. These facilities are built using appropriate technology (for example, least water-intensive). Planning for a “Smart from the Start” renewable project is transparent, with early and close cooperation between developers, permitting agencies, local governments, and conservation groups. (BLM, 2010; Nevada Wilderness Project, 2011)

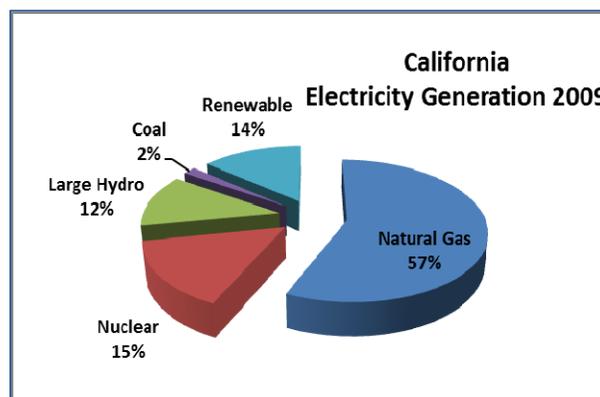
II. Solar Energy Facility Permit Streamlining Guide

A. Purpose

The purpose of this guide is to (1) assist counties and local government agencies in understanding the statewide goals, policies and programs designed to expand SEFs and (2) to develop regulatory incentives that support the expedited processing of SEFs that avoid or minimize adverse impacts to important agricultural lands, scenic resources and sensitive habitats. In particular, this Guide has been drafted to assist local agencies in the development of zoning standards to facilitate permitting and provides additional guidance for larger scale SEFs that require approval of a use permit.

This Guide is organized as follows:

- Section B describes the general considerations related to SEF development, including SEF types and sizes, the existing laws and regulations applying to SEFs, and the current procurement and incentive programs for renewable energy, including SEFs;
- Section C offers policy options and guidance regarding a range of development issues associated with SEFs for consideration by local agencies; and
- Section D describes important considerations and methods for local jurisdictions in streamlining their permit processes.



B. General Considerations

B.1 Type and Scale of SEFs

In order to meet the state's 33 percent Renewable Portfolio Standard (RPS) goal and other energy goals, California is going to have to deploy a wide range of different energy sources. It is likely that solar will make up a significant portion of the renewable portfolio, but all solar is not the same. Along with variation in technologies, from solar thermal to solar photovoltaic technology, there are a range of benefits and drawbacks to SEFs depending upon the size and location chosen for these projects.

The term "distributed generation" often refers to projects up to 20 megawatts (MW) in size, but size alone does not guarantee that the projects offer the

benefits often attributed to distributed generation. Some of these benefits include making efficient use of the grid to minimize the need for system investments, reduced environmental footprints, ability to make use of under-utilized land, etc. Distributed generation projects generally split into two categories. The first category of projects includes those located on the built environment, including commercial and residential rooftops and parking lots. These projects connect to the distribution grid and are often designed largely to offset onsite load, though they can also offer power for sale. These projects are usually Tier 1 under the Model Ordinance, and thus do not require discretionary permits and are not required to undergo CEQA review.

The second category of distributed generation projects includes ground-mounted projects that are also interconnected to the distribution grid. These projects have the potential to be located on lands such as marginally productive or contaminated agricultural lands, brownfields, former industrial sites, or closed sanitary landfills that are under-utilized, previously disturbed, and/or not optimal for other uses as a result of contamination. Utilizing these lands can help preserve biological habitats and open space elsewhere. Like with rooftop SEFs, projects that are located on the distribution grid can also offset load, and thereby maximize use of the State's existing electrical infrastructure and potentially reduce the need for the construction of costly and land-intensive transmission lines. Projects in the distributed generation size range are becoming more price-competitive when compared to projects over 20 MW as the costs of environmental review, mitigation, and transmission upgrades are realized by larger projects.

In addition to distributed generation, there are numerous larger projects being developed that are commonly referred to as "utility-scale." These projects generally interconnect directly to the transmission grid and require larger amounts of land to achieve their MW goals. They can achieve greater economies of scale and



are often proposed in areas with high solar insolation,² and thus achieve greater efficiencies.

In developing land use policies surrounding SEFs, counties should take into account the different benefits and challenges posed by these different categories and recognize that different considerations will need to be applied to each.³ This Guide focuses largely on ground mounted distributed generation in Tiers 1–3 and on larger distributed generation projects and utility-scale projects in Tier 4.



B.2 Legal Framework

It is important for project applicants, regulators and other stakeholders to understand the web of regulations that may apply to SEFs depending on site location. Once understood, duplicative or conflicting requirements can be more easily avoided and regulatory gaps filled. The primary laws that apply to SEFs that require a use permit are the California Environmental Quality Act (CEQA), and where federal permits are required or federal land is affected, the National Environmental Policy Act (NEPA). Under CEQA, a “lead agency” is responsible for considering the effects of all activities involved in a project. The lead agency coordinates with any “responsible agencies,” who have an obligation to approve portions of the project.

During review of applications for use permits for SEFs, each local agency will require compliance with some or all of the following:

- General Plan
- Specific or Area Plans
- Airport Land Use Compatibility Plans (if in Airport Referral area)
- Land Conservation Act (Williamson Act) Rules (if in an Agricultural Preserve)
- Local Coastal Plan/Program Compliance and Coastal Development Permit (if in Coastal Zone)
- Use Permit and Zoning Standards
- Encroachment Permit (for work in a public right-of way)
- Business License

² Insolation is a measure of solar radiation energy received on a given surface area in a given time.

³ For example, the Public Utility Code provides regulated public utilities an exemption from local planning ordinances. Therefore, if a SEF is being developed by a utility and not a private entity, the local jurisdiction may have limited to no authority over the project. In addition, the CPUC only requires that utilities obtain approval from the Certificate of Public Convenience and Necessity (CPCN) for projects that exceed 50 MWs in size. Thus, projects under 50 MWs that are utility owned may be able to proceed with very little local oversight.

- Financial Agreements
- Development Agreement
- Grading and Building Permits

At the local level, utility-scale systems that feed energy into the grid are often not addressed in local zoning ordinances. Generally, if a use is not listed as an allowed use, then it is not permitted in that zone. For this reason, local jurisdictions are encouraged to update their zoning codes to enable utility-scale SEFs where appropriate. Traditional zoning often only allows utility-scale power generating facilities in industrial or designated resource zones. Thus, many local jurisdictions are grappling with developing enabling legislation to permit SEFs that are compatible with the primary uses of various zoning districts.

- In addition to the permitting requirements and consistency with local plans and policies of the lead agency, other regulations and laws that can apply to SEFs fall into two categories: (1) laws and regulations that apply to all development (summarized in Section B.2.1 below) and (2) laws and regulations that apply only to solar energy projects (summarized in Section B.2.2 below). More detail on all of these existing regulations and laws is presented in Appendix A.



B.2.1 Laws and Regulations Applicable to All Development

Tables B.1, B.2 and B.3 list the federal, State, and other jurisdictional agencies that administer laws or have regulations that apply to local development projects and may be applicable to SEFs. Not all of these regulations apply to all projects. The primary source of the information in the tables is the California Energy Commission’s Energy Aware Facility Siting and Permitting Guide (September 2011).

Table B.1. Federal Agencies with Permit, Leasing, or Review Requirements

| Agency | Permit/Review | Legal Authority |
|---|---|--|
| Advisory Council on Historic Preservation | <ul style="list-style-type: none"> ■ Historic Preservation Advisory Comments | <ul style="list-style-type: none"> ■ National Historic Preservation Act of 1966, as amended ■ 36 CFR Part 800 |
| Army Corps of Engineers | <ul style="list-style-type: none"> ■ 404 Permit/Jurisdictional Determination | <ul style="list-style-type: none"> ■ Clean Water Act |
| Bureau of Indian Affairs | <ul style="list-style-type: none"> ■ Right-of-Way Grants | <ul style="list-style-type: none"> ■ Title 25, United States Code Sections 323-328 |
| Bureau of Land Management | <ul style="list-style-type: none"> ■ Right-of-Way Grants ■ Land Leases | <ul style="list-style-type: none"> ■ Federal Land Policy and Management Act ■ Mineral Leasing Act and Energy Policy Act |
| Department of Defense | <ul style="list-style-type: none"> ■ Land use Compatibility | <ul style="list-style-type: none"> ■ Special Use Airspace Military Training Routes |
| Environmental Protection Agency | <ul style="list-style-type: none"> ■ Adequacy of NEPA Review ■ Prevention of Significant Determination | <ul style="list-style-type: none"> ■ Clean Air Act Section 309 ■ Clean Air Act Section 112 |
| Federal Aviation Administration | <ul style="list-style-type: none"> ■ Airspace Review | <ul style="list-style-type: none"> ■ Title 14, Code of Federal Regulations, Part 77 |
| Fish and Wildlife Service | <ul style="list-style-type: none"> ■ Biological Assessment ■ Biological Opinion ■ Jeopardy Opinion | <ul style="list-style-type: none"> ■ Fish & Wildlife Coordination Act ■ Endangered Species Act ■ Federal Power Act ■ Migratory Bird Treaty Act ■ Eagle Protection Act |
| Forest Service | <ul style="list-style-type: none"> ■ Special Use Permit ■ Project-specific Plan Amendment (if not designated for the use) | <ul style="list-style-type: none"> ■ 36 CFR 251 |
| National Park Service | <ul style="list-style-type: none"> ■ Right-of-Way Permit (for transmission lines) | <ul style="list-style-type: none"> ■ Title 16, United States Code Section 79 |

Table B.2. State Agencies with Permit, Leasing, or Review Requirements

| Agency | Permit/Review | Legal Authority |
|---|--|---|
| Coastal Commission, San Francisco Bay Conservation and Development Commission | <ul style="list-style-type: none"> ■ Development Permit ■ Consistency with Local Coastal Plan ■ Consistency with federally approved Coastal Management Plan | <ul style="list-style-type: none"> ■ CA Coastal Act 1976, Public Resources Code Section 30000 et seq. ■ McAteer-Petris Act, Public Resources Code Section 66600 et seq. ■ Suisun Marsh Preservation Act of 1977, Public Resources Code Section 29000 et seq. ■ Coastal Zone Management Act, 16 United States Code Sections 3501 et seq. |
| Department of Fish & Game | <ul style="list-style-type: none"> ■ Approval Stream or Lake Alteration Permit ■ Dredging Permit ■ Endangered Species Take Permit | <ul style="list-style-type: none"> ■ CA Endangered Species Act, Fish & Game Code Sections 1600-07, 2090, 5650-53.9, 11037 |
| Department of Forestry and Fire Protection | <ul style="list-style-type: none"> ■ Timber Operations License ■ Timber Harvesting Plan ■ Timberland Conversion Permit ■ Fire Permit ■ Defensible Space Requirements ■ Fire Safe Regulations for Building in the SRA ■ Powerline Clearance Requirements ■ Industrial Operations Requirements | <ul style="list-style-type: none"> ■ Public Resources Code Sections 4100 et seq., 4511 et seq., 4521 et seq. ■ Public Resources Code 4291 ■ Public Resources Code 4290 ■ Public Resources Code 4292 – 4428 ■ Public Resources Code 4427-4428, 4431, 4442-4443 |
| Department of Parks and Recreation | <ul style="list-style-type: none"> ■ Right-of-Way Permit | <ul style="list-style-type: none"> ■ Public Resources Code Section 5012 |
| Department of Resources Recycling and Recovery | <ul style="list-style-type: none"> ■ Solid Waste Facility Permit | <ul style="list-style-type: none"> ■ Government Code Section 66796.32; Public Resources Code Section 40000 |
| Department of Toxic Substances Control | <ul style="list-style-type: none"> ■ Permit to Operate | <ul style="list-style-type: none"> ■ Health & Safety Code, Div. 20, Ch. 6.5 |
| Department of Transportation | <ul style="list-style-type: none"> ■ Encroachment Permit | <ul style="list-style-type: none"> ■ DOT regulations covering facilities that impact State highways |
| Division of Occupational Safety and Health (Cal-OSHA) | <ul style="list-style-type: none"> ■ Construction-related Requirements | <ul style="list-style-type: none"> ■ 29 CFR 910.0 |
| Energy Commission (CEC) | (for thermal projects > 50 MW) <ul style="list-style-type: none"> ■ Certification | <ul style="list-style-type: none"> ■ Warren-Alquist Act |
| Public Utilities Commission (CPUC) | (for transmission lines of IOUs and for SEFs owned by IOUs) <ul style="list-style-type: none"> ■ Certificate of Public Convenience and Necessity ■ Permit to Construct | <ul style="list-style-type: none"> ■ Public Utilities Act |
| Reclamation Board | <ul style="list-style-type: none"> ■ Encroachment Permit | <ul style="list-style-type: none"> ■ Water Code Section 8590 et seq. |
| State Historic Preservation Officer | <ul style="list-style-type: none"> ■ Section 106c consultation | <ul style="list-style-type: none"> ■ National Historic Preservation Act of 1966, as amended ■ 36 CFR Part 800 |

Table B.2. State Agencies with Permit, Leasing, or Review Requirements

| Agency | Permit/Review | Legal Authority |
|-------------------------------------|--|---|
| State Lands Commission | <ul style="list-style-type: none"> ■ Land Use Lease | <ul style="list-style-type: none"> ■ Public Resources Code, Section 6000 et seq. |
| State Water Resources Control Board | <ul style="list-style-type: none"> ■ Certification of Adequacy of Water Rights Permit to Appropriate Water Statement of Diversion and Use ■ Stormwater NPDES permit ■ Clean Water Act Section 401 Certification | <ul style="list-style-type: none"> ■ Public Utilities Code Section 2821; Water Code, Divs. 1 & 2 |

Table B.3. Local Agencies or Districts with Permit, Leasing, or Review Requirements

| Agency | Permit/Review | Legal Authority |
|--|---|---|
| Air Districts | <ul style="list-style-type: none"> ■ Preliminary/Final Determination of Compliance ■ Permits to Construct/Operate | <ul style="list-style-type: none"> ■ Clean Air Act ■ Warren-Alquist Act (if CEC) |
| California Independent System Operator | <ul style="list-style-type: none"> ■ Interconnection Agreement | <ul style="list-style-type: none"> ■ FERC Order No. 2003-C |
| Municipal Utilities | <ul style="list-style-type: none"> ■ Project Approval | <ul style="list-style-type: none"> ■ Locally Elected Governing Boards |
| Planning, Building, Environmental Health, Public Works, Fire | <ul style="list-style-type: none"> ■ Use Permits ■ Planning Clearances ■ Building Permits | <ul style="list-style-type: none"> ■ Building Code ■ General Plan ■ Zoning Ordinance ■ CA Planning Law ■ Fire Code |
| Regional Water Quality Control Boards | <ul style="list-style-type: none"> ■ Stormwater (NPDES) Permits ■ 401 Certifications | <ul style="list-style-type: none"> ■ Clean Water Act ■ Porter Cologne Water Quality Control Act ■ Water Code Section 13000 |

B.2.2 Laws and Regulations Applicable to SEFs Specifically

In addition to laws and regulations that may apply to all development, there are several regulations that apply specifically to SEFs. The following discussion summarizes the existing California regulatory framework for permitting SEFs, but should not be considered a complete list of all applicable rules.

- The **California Solar Rights Act** (Government Code Section 65850.5) was originally adopted in 1978. The law has been interpreted to apply to any solar energy system (hot water or electric) designed to provide energy for on-site use. It establishes the legal right to a solar easement, defines which SEFs are covered by its provisions, and limits local governments from adopting ordinances that would unreasonably restrict the use of solar. It also requires local governments to use a ministerial or administrative application review process instead of a discretionary process. Thus, the Model Ordinance defines accessory solar energy systems for on-site use as exempt facilities permitted

in all zones with a ministerial building or administrative permit subject to health and safety standards. The Solar Rights Act has been amended over the years to specify standards in the State building and electrical codes and permitting requirements. The Solar Rights Act has several related components:

- Civil Codes Sections 714 and 714.1: Limit covenants, conditions, and restrictions on solar installations and require timely review.
- Civil Code Section 801: Establishes the legal right to a solar easement.
- Civil Code Section 801.5: Defines which solar energy systems are covered by its provisions.
- Government Code Section 65850.5: Limits local government restrictions on solar installations and discourages local governments from adopting ordinances that would unreasonably restrict the use of solar energy systems. It also requires local governments to use a ministerial or administrative application review instead of a discretionary process.
- Health and Safety Code 17959.1: Provides for the city or county to administratively issue a permit, unless the solar installation would have a specific adverse impact upon public health or safety. It also establishes the health and safety standards a solar energy system is required to meet.
- Government Code 66473.1: Requires subdivision design to provide for future passive or natural heating or cooling opportunities.
- Public Resources Code 25405.5(b): Requires that for all tentative subdivision maps deemed complete on or after January 1, 2011, sellers of new homes must offer a solar energy system to all potential buyers.
- Government Code 66475.3: Allows local government to require easements to ensure subdivision parcels receive sunlight.
- Civil Code 714: Voids existing covenants and deed restrictions that prohibit or restrict installation or use of solar energy systems and specifies standards that solar energy systems are required to meet.
- Government Code Section 65919.10; Public Resources Code Sections 21080.35, 21083.9, 21084, 21094.5, 21094.5.5, and 25500.1: Incentivizes solar energy systems by providing a statutory exemption from CEQA for solar energy systems and associated equipment on existing roof tops or existing parking lots. (SB 226, Simitian, 2011)
- Government Code Sections 51255.1, 51190 et seq.; Fish & Game Code Sections 2805, 2835, 3511, 4700, 5050; Revenue & Taxation Code Section 402.1: Provides a mechanism for larger utility-scale SEFs located on lands that are physically impaired or marginally productive under a Land Con-

ervation Act (Williamson Act) contract to temporarily rescind the contract and replace the contract with a solar-use easement on the property. (SB 618, Wolk, 2011)

Other laws relevant to solar facilities include:

- **California Fish and Game Code 2069** (AB x1 13, Perez 2011): Defines the Desert Renewable Energy Conservation Plan (DRECP) and provides the framework for interim mitigation of endangered species within the DRECP plan area.
- **California Fish and Game Code 2099** (AB x1 13, Perez 2011): Provides for the management of the Renewable Energy Trust Fund for mitigation of California Endangered Species.
- **California Fish and Game Code 2099.10** (AB x1 13, Perez 2011): Establishes fee to be paid by eligible renewable energy projects to the Department of Fish and Game for processing of incidental take permits and the establishment of cost sharing agreements between the Department and the CEC.
- **California Fish and Game Code 2099.20** (SB 16, Rubio 2011): Requires the Department of Fish and Game to take steps to expedite the processing of renewable energy permits and requires the Department to report back to Legislature on permitting activities.
- **California Public Resources Code 25619** (AB x1 13, Perez 2011): Establishes, pending appropriation, a \$7 million grant program for the development or revision of plans, policies and rules that facilitate the development of eligible renewable energy projects for the Counties of Fresno, Imperial, Inyo, Kern, Kings, Los Angeles, Madera, Merced, Riverside, San Bernardino, San Diego, San Joaquin, Stanislaus, and Tulare.
- **Government Code Sections 51200-51297.4 and 16140-16154; Revenue and Taxation Code Sections 421-430.5** (California Land Conservation Act or Williamson Act): This program was enacted in 1965 to ensure sufficient food supplies, discourage unnecessary conversion of agricultural lands, discourage leap-frog development, and to preserve open space. Williamson Act contracts currently cover one-third (16.6 million acres) of private land in California. The contracts are principally with counties, with only a few cities participating. Landowners with contracts realize lower property tax payments. Solar (and wind) facilities may be located on land subject to the Williamson Act if one or more of the following conditions are met: the use is compatible with the agricultural operation; the contract is not renewed; the contract is cancelled; or the land is acquired through eminent domain. Determinations are very site- and fact-specific and require consultation with Department of Conservation and local governments.



Landowners who choose to enter into Williamson Act contracts with the county agree to maintain the land in commercial agricultural use for a period of 10 or 20 years in exchange for a reduction in property taxes. Each year a tax reduction is received, the contract extends for another 10- or 20-year period until the contract is phased-out or otherwise terminated. If the SEF is proposed on a site under a Land Conservation contract, the facility must be listed as a compatible use in the locally adopted Agricultural Preserve Rules and allowed by the type of contract. In addition, findings of compatibility must be made by the legislative body in consultation with the Agricultural Commissioner and/or the appointed advisory body. The SEF must be found consistent with the principles of compatibility under Government Code Section 51238.1. The SEF must be found not to impair the agricultural productivity of the land or lands in the surrounding area. The Agricultural Preserve Rules may limit the size and amount of land area that can be devoted to a utility-scale facility that is not for on-site agricultural use.

- **Public Utilities Code 2869(b):** When a residence receives electricity from a SEF on the property, or on adjacent property, but the system is owned by a different party, the owner of the SEF must record a Notice of Independent Solar Energy Producer Contract against the property where the electricity is used and the property where the electricity is generated, if different.
- **Public Resources Code 4290-4291:** These sections define fire protection and defensible space requirements that would also apply to SEFs.
- **Public Resources Code 4292-4293:** These sections define requirements for fire safety standards related to electric power lines and required vegetation clearances.

B.3 Procurement and Incentive Programs

To date California has implemented a range of different procurement programs and incentive vehicles to promote the expansion of renewable energy to meet the State's RPS and other energy goals. There has been particular attention paid to growth in the distributed generation market in the last few years. Virtually all of the energy generated in California is developed to satisfy the requirements of a particular procurement program authorized by the California Public Utilities Commission (CPUC) or a municipal utility, which are targeted towards different SEF project categories. Some of the key procurement programs are described below in order to provide some context for developers' motivations in designing their projects.

- **Net Energy Metering (NEM):** For small-scale systems up to one MW that are sized primarily to serve on-site load, California has a robust NEM program. NEM allows a customer with an eligible renewable energy generation facility (e.g., an SEF) to receive credit for generating excess electricity that can be used to offset the electricity used onsite when the SEF is not generating power, e.g., at night. Many NEM projects also take advantage of California Solar Initiative (CSI) incentives, but reductions in the price of solar technologies and improvements in the permitting processes and applicable rate programs are enabling developers to continue to build NEM projects even without CSI incentives.
- **Feed-In Tariff:** The Legislature recently expanded the State's feed-in tariff program to allow for wholesale (i.e. projects designed to principally sell power to the grid) renewable energy systems up to three MW in size to obtain a pre-determined rate for power sales on a first-come, first-served basis. The IOU program is currently capped at 750 MW. Other municipal utilities, such as the Sacramento Municipal Utility District and Los Angeles Department of Water and Power, have similar programs. A feed-in-tariff provides a consistent price signal for qualified developers in the identified size range. Feed-in tariff projects can be rooftop or ground-mounted, and will normally be interconnected to the distribution grid.
- **Renewable Auction Mechanism (RAM):** The CPUC established a one-gigawatt pilot program utilizing the RAM to facilitate the development of renewable energy facilities from 500 kW to 20 MW in size. The program requires the three IOUs to hold biannual competitive auctions in which



renewable energy producers can submit bids to sell electrical power. The utilities must award contracts starting with the lowest-cost viable project and move up in price until the MW requirement is reached for that round. The program uses standard contract terms to lower costs and provides an effective means of financing projects. To minimize underbidding, the program requires a development security and relatively short project development timeframes. Each participating utility publishes interactive web based maps that assist developers with choosing project locations based on available grid capacity. These maps are useful for local jurisdictions to locate areas with underutilized grid infrastructure within their planning boundaries.

For utility-scale projects, the IOUs generally run a similar competitive solicitation, known as the RPS solicitation, once a year in order to enter into contracts for larger-scale projects to help meet their RPS goals.

- **Other programs:** In addition to these programs, utilities are also able to negotiate bilateral contracts for procurement of renewable energy in any size range. The feed-in-tariff, RAM and RPS solicitation programs are specific to California’s IOUs, but the municipal utilities in California also have a variety of different programs to enable them to meet their RPS goals. These policies, incentives and regulatory programs have fueled a demand for both small and utility-scale renewable energy facilities and encouraged rapid widespread development of SEFs throughout the State.

C. Policy Options and Guidance for Local Jurisdictions

Many of the underlying policy, legal and technical issues associated with permitting SEFs are similar. However, due to regional variations in soil types, topography, water availability, contamination levels and other geographical differences, a “one size fits all” approach to development of SEFs is difficult to achieve in a State as large and diverse as California. Therefore, this section contains a discussion of common issues along with a range of policy options, which can be tailored to suit a particular jurisdiction.

The issues addressed in the following sections are:

- Local Incentives
- Project Siting
- Permit Streamlining
- Job Creation & Economic Development
- Interconnection
- Brownfield and Landfill Reuse
- Protecting Farmland
- Environmental Sensitive Habitats
- Scenic, Historic, and Cultural Resources
- Decommissioning & Financial Assurance
- Abandoned Facilities

C.1 Local Incentives

Local incentives offer one overarching policy tool to facilitate appropriate SEF development that benefits the local community, and can complement State and federal incentives. Counties have the ability to support the expansion of SEFs through renewable power purchase agreements (PPAs), public outreach efforts, staff training, renewable energy General Plan designation, implementation of Renewable Energy Combining Zone, reduced fees for SEFs, and financial incentives.

Some communities are taking advantage of recent State legislation facilitating local incentives. AB 811 (Levine, 2008) enables local jurisdictions to provide financing for energy conservation and renewable energy projects through a property tax assessment, otherwise known as Property Assessed Clean Energy (PACE). Many communities are leading the way by adopting aggressive goals for local government operations and implementing plans for achieving those goals, including installation of SEFs on various public buildings, airports and other publicly owned lands.

Another local incentive that is gaining ground in California is Community Choice Aggregation, where a local government agency can become a power service provider by purchasing or generating power and selling directly to consumers. This allows for investment in the renewable energy projects that may not be located within the local jurisdiction, expanding the opportunities to areas where solar is most feasible.

In addition, throughout this section, streamlining the permitting process is identified as a tool for addressing various issues. Section D provides additional detail with regarding considerations relevant to streamlining the permitting process. Overall, it is important to remember that a fundamental legal principle in land use planning, sometimes referred to as equal protection, requires that similar projects should be treated in a similar manner in the discretionary permit process. As such, it is important that regulatory requirements placed on SEFs be implemented in a manner that results in a level playing field. Comprehensively considering different types of solar projects can help lay the groundwork for equitable regulatory requirements.

C.2 Project Siting

When counties or solar developers begin evaluating sites for potential solar facilities it is important to first identify the constraints and opportunities of a particular location. Factors such as flooding, wetlands or protected habitats or the presence of threatened or endangered species should be identified and avoided where possible. If avoidance of hazardous site conditions or sensitive environmental factors is not possible then the potential site should be dropped from

consideration or an Environmental Impact Report prepared. Conversion of farmland designated as Prime Farmland, Unique Farmland or Farmland of Statewide Importance and protection of scenic resources are other considerations that must be evaluated and properly weighed in the decision-making process. Similar considerations should be applied to the proximity to transmission lines and other important infrastructure. Specific siting considerations are discussed in the following sections.

Projects that are sited and designed to avoid important resources should be expedited in the permitting process. However, projects that are proposed in locations that potentially cannot avoid impacts to these resources should be subject to discretionary permits, environmental review and public hearings in order to ensure the projects are designed to minimize impacts and contain proper mitigations if they are to move forward. More specific policy options are discussed in the following sections.

C.3 Permit Streamlining

Discussion. Encouraging the rapid expansion of SEFs is the adopted policy of the state of California and is supported in many County general plans. Nonetheless, the current permit process is frequently lengthy, uncertain and expensive. Inconsistent processes and requirements from jurisdiction to jurisdiction and between agencies further complicate renewable energy development. Streamlining the permit process is widely considered a compelling incentive that local government can offer. A faster, more predictable permit process is particularly important in light of the relative newness of the industry, the current economics of SEFs, and concerns regarding the looming impacts of climate change.

There are many other values also supported by state and local policies, including the protection of important environmental resources and agricultural lands and sustaining robust food supplies. *To this end, the goal of the counties should be to promote the development of SEFs in alignment with the need to protect important environmental resources, agricultural lands, and public safety.*



Policy Options. Permit streamlining (Appendix A - Table 1) is proposed as a potentially compelling incentive for well-sited projects. Streamlining methods

include the adoption of clear standards or special use regulations that address environmental concerns and provide a clear set of guidelines for the solar industry to follow as part of a more predictable approval process. The use of well defined siting criteria as provided in the Model Ordinance or Renewable Energy Combining Zones can potentially provide additional incentives to encourage siting of such facilities in appropriate areas by further reducing the burden on the applicant of costly environmental review and uncertainties with discretionary permit review. Establishing consistent standards and reduced building permit fees, especially for a direct-use SEF, is also a practice used by many communities. Streamlining can also occur by dedicating agency staff members to review solar projects, or by giving priority to renewable energy projects, and by allowing applicants to contribute to County costs for outside consultants or specialists to expedite reviews.

While federal, state and local programs are fueling the demand for rapid expansion of solar energy facilities throughout the state, the permitting process can often become a major obstacle at the local level, particularly for large utility-scale facilities in areas where local officials have limited experience with power generation facilities. This Guide is intended to assist local agencies in streamlining the permitting process by providing increased consistency across jurisdictions and addressing policy issues and environmental concerns in the permitting process.

C.4 Job Creation and Economic Development

Discussion. According to the Solar Foundation, the solar sector is creating jobs at a much faster rate than the overall U.S economy. A 2008 Navigant study found that for every six homes that go solar, one local “green” job is created. Over the past year, the number of people employed by the solar industry has doubled from approximately 50,000 in 2009 to 100,000 in 2010. The number of jobs in the solar industry is expected to increase by 26 percent in 2011, which is an unusually high industry growth rate. In 2009, there were approximately 4,000 residential



solar jobs in the U.S. By 2012, projections indicate that there will be over 20,000 jobs in the home solar industry.

Any given solar installation produces an increase in income and consumption greater than the initial amount spent — an effect known as the “multiplier effect.” Solar energy projects produce construction jobs and revenues that accrue to local jurisdictions and enable the funding of additional community benefits. For large-scale ground mounted solar projects, the availability of long-term operations employment at the solar facilities should be considered in balance with any potential loss of employment resulting from the conversion of land from uses such as agriculture to solar energy production.

Projects that result in benefits, such as job opportunities for existing community members and increased local purchases, are likely to be considered welcome additions by the community. Since construction and operations jobs in the solar energy field require specific skills, workforce training programs can facilitate the placement of local job seekers at these projects. As such, it is often mutually advantageous for a solar project applicant to work with local workforce investment boards, community colleges and similar agencies to increase the opportunity for existing nearby residents to also obtain employment.

In addition to issues of job recruitment and training, communities continue to struggle to provide services to businesses and residents alike. Although solar facilities are not labor intensive uses, they do require extensive land areas, generally in more remote locations where public services, such as police, fire, road maintenance, and emergency services are more difficult and costly to provide. In cases where farmlands are converted to solar facilities, the construction jobs associated with the project may not offset the permanent loss of agricultural jobs that support residents of the community.

Policy Options. Among the jobs and economic development strategies, individual counties or regions may wish to consider are:

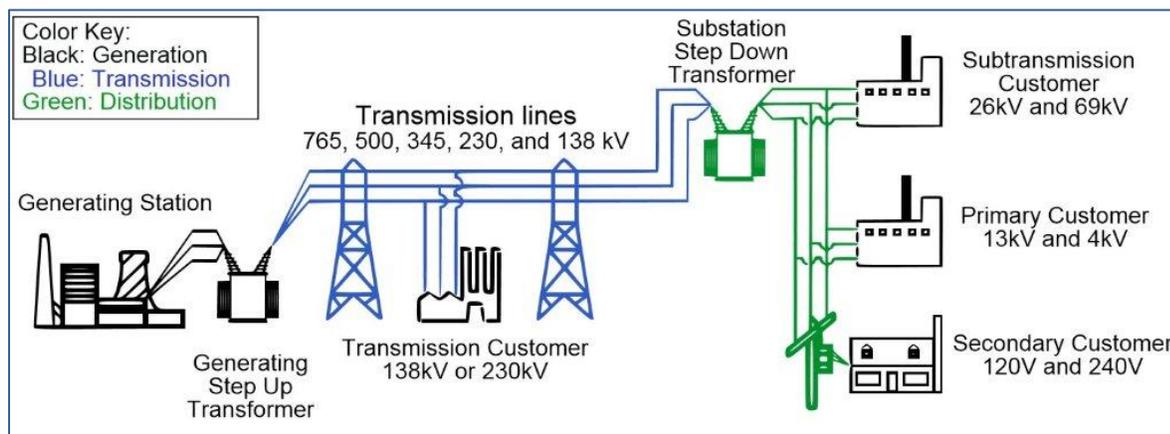
- Adopting the Model SEF Permit Streamlining Ordinance adapted to local conditions to provide expedited permit processing and increased certainty for qualifying SEFs.
- Working with local community colleges and building industry associations on training programs for contractors and related trades.
- Pursuing federal, state and utility funding for job training programs. Incentivizing a contribution or cooperative approach to job training in renewable energy, restoration or similar activities may be appropriate.
- Offering priority permit processing when a clear commitment to workforce development is provided.

- In collaboration with project applicants, agreeing on a permit condition calling for the preparation of local hiring plans. In this approach, targets may be set for local hires, along with a protocol for sequencing local job recruitment activities and construction monitoring requirements. It is important for local hiring plans to retain flexibility and be in alignment with legal principles pertaining to equal access to employment and freedom of commerce.
- Requiring Sales and/or Use Tax Agreements that require reporting of sales and/or use taxes on the construction materials at the job installation site so that the sales and use taxes will accrue to the local jurisdiction in which the project is located. On large installations, this can amount to millions of sales or use tax dollars that can then help to offset the cost of improved infrastructure, job training programs or other services.
- Requiring Fees In Lieu of Property Tax Agreements in the event a site is sold to a non-taxable entity to offset the cost of providing county services for police, fire, road maintenance and emergency services with the conclusions supported by a fiscal nexus study.
- Negotiating Franchise Agreements for use of public right-of-ways requiring an annual fee.
- Implementing “Community Benefit Fees” to offset permanent job losses, such as agricultural jobs lost with conversion of farmlands to SEFs.

See Appendices C through H for examples of programs and permit conditions applicable to local economic development and fiscal impacts.

C.5 Interconnection

Discussion. A critical component to identifying a viable site for the construction of a SEF is the ability to interconnect to either the distribution or transmission grid in a location that will not require prohibitively expensive or time consuming upgrades. There are a number of different factors in the interconnection process that affect a developer’s ability to select a specific size and location for their project that Counties should be aware of when evaluating appropriate zoning



policies for SEFs.

SEFs can potentially interconnect to the transmission grid or to the distribution grid. Transmission lines are generally those that are used to transmit energy over a long distance at higher voltages while distribution lines are those used for delivering energy directly to the customers, usually at a lower voltage. The voltage of a line is one limiting factor on the size of the systems that may connect to them. Another important factor is what entity has jurisdiction over the lines. Generally speaking, the Federal Energy Regulatory Commission (FERC) has jurisdiction over transmission lines and the California Independent System Operator (CALISO) manages them on behalf of the utilities. There is a complex seven-factor test that is used to determine whether a line is a FERC-jurisdictional transmission line and the size of the lines in each of the three Investor Owned Utility's (IOU) territories in California varies. The California Public Utilities Commission has jurisdiction over the distribution lines owned by the IOUS, and the utilities operate their distribution lines independently.

There are pros and cons to interconnecting on either system that may affect what location a developer chooses for their project. The procedures that govern interconnection vary depending on who has jurisdiction over the point of interconnection (there are FERC jurisdictional, CPUC jurisdictional, and publicly owned utility procedures), which utility's territory the project will be located in, and, in some cases, which procurement program the generator plans to sell its power through. The length of the interconnection process can vary considerably depending upon which set of procedures the project must use. Generally speaking, the interconnection procedures provide a process for the utilities and/or the CALISO to study what, if any, upgrades must be made to the distribution and/or transmission system in order for the project to safely place the energy generated onto the grid for sale.

Along with the size and type of the generating unit itself, there are numerous factors that determine whether a project may trigger upgrades on a transmission or distribution line. Because interconnection costs can range from a few thousand dollars to over a million or more, developers often try to be very strategic when selecting a point of interconnection. For smaller distribution level projects, developers often seek to locate on lines that have capacity for additional generation



that does not exceed the minimum load on the line. This can mean that few if any upgrades will be required and can also enable the project to take advantage of expedited review procedures. Interconnection to the transmission grid is generally significantly more expensive. Due to their size most large systems will connect directly to the transmission grid while smaller projects tend to prefer distribution level interconnections. California has numerous transmission-constrained areas and interconnection in those areas can be particularly difficult, time-consuming and expensive. While upgrades to the transmission grid are more cost-intensive up-front, some of those costs often can be reimbursed to the developer. Currently upgrades on the distribution system are borne exclusively by the developer.

While the IOUs have recently begun to make more information available to the public about the capacity and other relevant information regarding their distribution and transmission lines,⁴ it continues to be difficult for developers to determine which locations will require upgrades in advance of submitting an application. This information asymmetry, and the constantly evolving nature of the grid, may also make it difficult for Counties to take precise interconnection locations into account in their zoning and overlay designations. Although it is not always possible to predict the capacity of the transmission and distribution system for site planning, it is clear that the location of transmission lines or the need to extend transmission lines is an important factor in siting of SEFs.

Local jurisdictions are pre-empted under state law from reviewing where transmission facilities (under 100 kV) and substations can be located. However, the policies of a local General Plan or Zoning are evaluated by the CPUC and can influence the transmission facility siting decisions. Transmission lines are encouraged to be located along existing rights-of-ways or roadways, where feasible. In addition, transmission and distribution upgrades can require environmental review under CEQA.

Policy Options. In addition to using Smart from the Start principles, counties should consider the locations of existing



⁴ Utility system maps are available at:
PG&E: <http://www.pge.com/b2b/energysupply/wholesaleelectricssolicitation/PVRFO/pvmap/>
SDG&E: <http://sdge.com/distributed-generation-map>
SCE: <http://www.sce.com/EnergyProcurement/renewables/renewable-auction-mechanism.htm>

and planned transmission and distribution lines and any known constraints on those lines in their evaluation of appropriate zoning and possible sites for renewable energy combining zones.

The California Energy Commission can provide information on the location of these facilities to counties under a confidentiality agreement. The utility in charge of the lines in the area is also a good source for information. As described above, the IOUs in California have recently provided publicly available maps that are updated regularly and contain some information on line capacity, substation locations and other relevant data points. While there are numerous factors that determine what the costs of connecting are at any particular point on the grid, depending on the size of the project, the distance to the interconnection point might be a limiting factor.

The project description for proposed SEFs should include all known equipment that is necessary to connect the project to the electricity grid, including any substations, line extensions, or other facilities. Some projects may include interconnection equipment that will become the property of the electric utility. For the investor-owned utilities, this can trigger the need for PUC approval of these equipment upgrades. In doing its review, the PUC will rely on the General Plan consistency and CEQA analysis conducted by the local government provided it determines that the local review was adequate. Therefore, local governments should designate the PUC as a responsible agency that receives all CEQA notices for the project, so the PUC has the opportunity to participate. In addition to designating the PUC as a responsible agency, the local government may want to reach out directly to the agency early-on in the process to ensure that all the relevant components of the project are included in the project description.

Larger projects may include extension of transmission or distribution lines or new substations, which should also be evaluated for consistency with local plans as part of the use permit or rezoning process. Failure to consider these as a component of the underlying SEF could create segmentation problems under CEQA. Some jurisdictions have policies that include setbacks for transmission lines or major substations to separate them from residential and other sensitive land uses (i.e., schools) due to concerns over electromagnetic radiation. Siting of new transmission lines in agricultural areas should maintain continued use and access for agricultural practices including agricultural aviation and farm machinery, through careful siting of support structures. Transmission lines should avoid environmentally sensitive wildlife habitat areas. Considerations should also be given to vegetation management below transmission corridors, which reduces the risk of wildfire, and to potential impacts to wildlife. In designated forested lands transmission lines can result in the conversion of timberland.

C.6 Brownfield and Landfill Reuse

Discussion. The U.S. Environmental Protection Agency (EPA) has launched a program to help encourage renewable energy development on current and formerly contaminated, landfill and mine sites. The U.S. EPA RE-Powering America’s Land program has begun to evaluate the potential for renewable energy on certain Superfund sites in the U.S., including three sites in California. Outside of Superfund sites, there are numerous other contaminated sites in California that could offer opportunities for renewable energy.

Brownfields are prime candidates for renewable energy projects for a variety of reasons. Previously disturbed sites tend to not offer high quality biological habitat due to the intensity of their former use. Depending on the level and type of contamination, and the plans for clean up of the site, there may be a limited range of other uses appropriate for the site. Renewable energy projects can thus provide the opportunity to bring contaminated properties that might otherwise lay vacant into productive and sustainable use. Former industrial sites often have access to good interconnection locations with existing grid infrastructure and may also be located near existing load. Development of these sites can help preserve “greenfields” and agricultural lands. Where there is an ongoing cleanup operation onsite that requires significant energy use, the development of renewable energy could be used to offset the energy use required for remediation. Closed landfill sites are also good candidates for some of the reasons noted above and because the natural settling of the land sometimes makes other development on the site impossible. New panel technologies and methods for installing footings have made solar and wind possible on these sites. The United States Environmental Protection Agency (EPA) has launched a program to encourage “renewable energy development on current and formerly contaminated land and mine sites when it is aligned with the community’s vision for the site.” The EPA program helps to identify sites with good renewable energy development potential



and “provides other useful resources for communities, developers, industry, state and local governments or anyone interested in reusing these sites for renewable energy development.”⁵

These sites also pose particular challenges for SEF developers. One of the central concerns that SEF developers have is whether they will incur liability for the existing contamination if they chose to develop on the site. These concerns are valid, although in some cases may be adequately addressed using state and federal cleanup laws for particular sites. California has a number of statutes that provide liability protection for prospective purchasers or lessees. Sites that have existing soil contamination often contain restrictions that prevent developers from disturbing the soil layers, which can pose a challenge for sites that are not level or where the footings require disturbance.

Policy Options. In many cases California counties have already taken ownership over contaminated sites or are actively involved in the remediation of sites. In other cases the lands are privately held. Counties should evaluate whether providing expedited permitting for SEFs located on lands contaminated with hazardous materials is feasible and whether it provides sufficient incentives to private developers to consider utilizing those sites. Including sites with pre-approved remediation plans in place in areas that only require minor use permits for the installation of SEFs may help make these areas less difficult to utilize. In some instances there may be a potential to include brownfields in Renewable Energy Combining Zones and further facilitate their development.

C.7 Protecting Farmlands

C.7.1 Important Farmlands

Discussion. The protection of productive farmlands — including the agricultural operations themselves — is an issue of national, statewide and local importance. Agriculture is a critical consideration to the economy, quality of life and food security. It is widely held that our food systems are as much at risk as our energy systems from the impacts of a growing global population and climate change. As such, issues of concern include the degree to which nonagricultural structures and activities are allowed on prime soils



⁵ USEPA, Re-Powering America’s Land, Siting Renewable Energy on Potentially Contaminated Land and Mine Sites, available at: <http://www.epa.gov/oswercpa/>.

and other important agricultural lands, buffer zone requirements, and avoidance versus mitigation pertaining to the conversion of agricultural lands.

Agricultural protection measures vary across the State depending upon the local geography, soil types, and past land uses, as well as the prevailing economic and political context. The potential for conversion of agricultural lands is a primary concern that must be considered by local jurisdictions in adopting local ordinances and processing use permits. The Model Ordinance for smaller solar projects suggests limiting the amount of disturbance to Prime Farmland, Farmland of Statewide Importance, and Unique or Locally Important Farmlands, unless such land has been determined to be chemically or physically impaired.

Policy Options. In some circumstances, SEFs may be developed in conjunction with an underlying agricultural use, such as sheep grazing, to limit the loss of agricultural productivity. In some cases, an agricultural management plan can be implemented to ensure that the long term productive capability of the land is monitored and maintained. In these cases, mitigation for loss of agricultural land may not be required, when the farming activity continues in conjunction with the SEF as a “conjunctive use.” On the other hand, once a site is converted to an energy-generating facility, there is a general presumption that the site will continue to be used for energy production on an ongoing basis, even though the permit or contract specifies otherwise. Use permits run with the land and thus allow for a permanent conversion of agricultural lands in most cases. In cases where only a portion of the site is used for the SEF, an in-perpetuity agricultural conservation easement on the balance of the land may ensure that the loss of agricultural land is limited.

Agricultural zoning typically requires that the primary use of the land remain in agricultural production. Some counties have strong agricultural preservation policies in their General Plans and do not permit uses unrelated to agricultural production on prime agricultural lands and limit non-agricultural uses to those that do not remove land from production or impair agricultural operations. Other counties require mitigation for the loss of agricultural lands from other similar facilities or have established in-lieu fees and mitigation funds. Counties should apply a consistent set of policies regarding farmland mitigation to similar development that permanently converts farmland to non-farm uses.



If the proposed Tier 3 or 4 SEF will impact farmlands classified by the State Department of Conservation as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland, the agency should evaluate the productive capability of the land to determine the significance of the impact. In some counties, Important Farmlands also include Farmlands of Local Importance. Due to the variation in how those locally important farmlands are defined, each county must evaluate impacts to those lands based on local practices. The amount of temporary or permanent loss of important farmland should be determined by a quantitative analysis of impacts such as using Department of Conservation's Land Evaluation and Site Assessment Model, or similar assessment, prepared by qualified professional(s) under consultation with the local Agricultural Commissioner and, if necessary, the State Department of Conservation.

Where Important Farmlands are determined to be significantly impacted, feasible mitigation measures for the temporary or permanent loss of agricultural lands should be incorporated in accordance with locally adopted guidelines and procedures. For example, if allowed by local guidelines, mitigation for the temporary or permanent loss of agricultural land can be satisfied by the dedication or funding of perpetual agricultural conservation easements either on the remainder of the parcel or off-site. Such conservation



easements should be held by a qualified conservation organization or other arrangements satisfactory to the County. Conservation easements may also be tiered/layered with conservation easements for mitigation of some sensitive habitats (see discussion on Environmentally Sensitive Habitats) provided the conservation objectives and management requirements are compatible with farming activities. In some counties an in-lieu fee is established that allows the agency to acquire agricultural conservation easements in accordance with countywide programs. Due to changes in market values of land and the difficulty of public land acquisitions, the preferred approach is direct acquisition and dedication of easements or fee title by the applicants rather than payment of in lieu fees. If no feasible mitigation measures are identified, then the impact to important farmlands would need to be disclosed in an Environmental Impact Report (EIR) and a statement of overriding considerations would need to be adopted by the local agency in order to approve the project.

Another option, discussed earlier in this document, is to encourage developers to site projects in Renewable Energy Combining Zones (Appendix B). This would enable a county to identify the lower-impact areas for distributed generation or larger utility-scale facilities and limit the cumulative loss of important farmlands that could be converted.

C.7.2 Agricultural Preserves

Discussion. Another siting consideration related to the conversion of farmlands is the status of a parcel under the Land Conservation Act (Williamson Act). The Land Conservation Act of 1965 enables counties to establish agricultural preserves and provide tax incentives to farmers who agree under contract to maintain their land in agricultural production. Landowners who chose to enter into contracts with the county agree to maintain the land in commercial agricultural use for a period of 10 or 20 years in exchange for a reduction in property taxes. Each year a tax reduction is received, the contract extends for another 10 or 20-year period until the contract is phased-out or otherwise terminated. If the SEF is proposed on a site under a Land Conservation contract, the facility must be listed as a compatible use in the locally adopted Agricultural Preserve Rules and allowed by the type of contract. In addition, findings of compatibility must be made by the legislative body in consultation with the Agricultural Commissioner and/or the appointed advisory body. The SEF must be found consistent with the principles of compatibility under Government Code Section 51238.1. The SEF must be found not to impair the agricultural productivity of the land or lands in the surrounding area. The Agricultural Preserve Rules may limit the size and amount of land area that can be devoted to a utility scale facility that is not for on-site agricultural use.

A SEF that is designed to support the agricultural use or another permitted compatible use, such as a processing facility, is generally considered compatible on lands under a Land Conservation Act (Williamson Act) contract, described in Section B.2.2 above. A utility-scale SEF may be considered compatible within an Agricultural Preserve or on land under a Land Conservation Act contract when specific findings are made that the SEF does not impair the agricultural operation and does not affect the agricultural productivity of the land or lands in the surrounding area. If the facility is not sized or determined to otherwise to be a compatible use, or if a site is determined to no longer be feasible for agricultural use due to marginal soils or inability to irrigate, the site may be phased out of the contract prior to construction, or the contract may be terminated either through cancellation or conversion to a solar use easement under SB 618, also described in Section B.2.2.

Policy Options. In order to allow for SEF development not related to the onsite agricultural use, Williamson Act contracts may be terminated or solar use easements may be put in place.

There are several ways for a Williamson Act contract to be terminated, including non-renewal and phase-out, lot line adjustments, easement exchanges, solar use easement conversions or cancellation. Both easement exchanges and cancellations require review by the State Department of Conservation.

Phase-out is initiated by a notice of non-renewal served by the landowner that begins a nine-year phase out period. During the phase out period, the restrictions on the land are still in effect, while the taxes on the property are gradually increased to full value. Lot line adjustments and easement exchanges immediately remove the land from the contract by placing other non-contracted land under the contract or easement in exchange for rescinding the contract on a specific parcel. Lot line adjustments and agricultural conservation easement exchanges could be considered measures that also mitigate the potential loss of agricultural land as they provide a mechanism to ensure the same amount of land remains in commercial production.

Cancellation of a contract is a discretionary action which requires a public hearing and several findings that must be made by the legislative body as defined under Government Code Section 51282. The two primary findings are that: (1) cancellation is consistent with purposes of the Land Conservation Act, and (2) cancellation is in the public interest. There are several additional findings or criteria required for each of these two major findings. For example, the local agency must find that cancellation can be found to be in the public interest only if other public concerns outweigh the objectives of the Act and that there is no proximate non-contracted land which is both available and suitable for the use.

Cancellation findings have generally been made only on lands that have been determined to be marginally productive or otherwise contaminated. Cancellation requires a penalty fee up to 12 percent of the unrestricted value of the land.

Solar use easements are another option recently approved for use under SB 618 that would enable the contract to be rescinded and replaced with a 10-year rolling solar easement on marginally productive or physically impaired lands.

C.8 Environmentally Sensitive Habitats

Discussion. The protection of high value biological resources is an important consideration when siting a SEF. The loss or conversion of habitat, fragmentation of habitat by roads, increased predation, fencing and weed management associated with solar facilities is a potential concern. Sites should be carefully evaluated and surveyed by a qualified biologist to determine areas that contain (a) rare plants or habitats for any rare, threatened or endangered species, or (b) important landscape or regional habitat linkages or connectivity areas. Known sites are generally listed in the California Natural Diversity Database maintained by the Department of Fish and Game. However, many sites have not been surveyed and may not be included in the database so site specific surveys are necessary. Many counties have policies and programs to protect important biotic resources, including designation as open space in the General Plan, adopted streamside conservation areas, riparian and wetland setbacks, or Renewable Energy Combining Zones.



Policy Options. If a proposed SEF project is well sited to avoid environmentally sensitive habitats, then the permitting process may be expedited either through an administrative permit or minor use permit and use of a mitigated negative declaration. However, if the SEF is located on high habitat value parcel(s), the permitting process will require more extensive environmental review possibly including an EIR and public hearings before the decision-making body. Applicants are encouraged to coordinate with resource agencies, such as the State Department of Fish and Game and the U.S. Fish and Wildlife Service, during site selection to ensure that important habitats can be avoided, impacts minimized, or that the loss of such habitats can otherwise be mitigated. Local agencies should consider important biotic resources when adopting a solar streamlining ordi-

nance and incorporate siting criteria to minimize impacts.

C.9 Scenic and Historic Resources

Discussion. The siting of a SEF should include an evaluation of the community's scenic and historic resources. Scenic and historic resources often form the backdrop of a community and are highly valued as an important element of the local tourism industry. Many communities have designated scenic corridors and scenic areas in their General Plans and zoning laws, including significant landforms, ridgelines, community separators and scenic highways. Due to their size, utility-scale SEFs can have direct and indirect effects on identified scenic and visual resources areas, especially if they are surrounded by chain link fences topped with barbed wire.



Policy Options. Scenic resources should be taken into consideration when siting SEFs. In addition, measures that can be used to mitigate potential visual impacts of SEFs in designated scenic areas include avoiding significant scenic or historic resource areas. When avoiding these areas is not feasible, consider using larger setbacks from public roads and streams. One mitigation option to preserve scenic resources is to require siting of SEFs such that natural topography and vegetation will help screen views of the project in scenic areas. Requiring additional landscape vegetation may be appropriate along the road frontages and adjoining residential areas to provide a visual buffer. In sensitive locations, fencing materials and similar techniques should be considered to soften the visual effects to the extent practical, while ensuring that the fencing or screening is designed to be wildlife friendly.

C.10 Cultural Resources

Discussion. Cultural resources, including sacred landscapes, should also be taken into consideration when siting SEFs. Record searches should be obtained from the appropriate California Historical Resources Information System (CHRIS) Information Center and Native American consultation conducted. The records search will determine (1) whether a part or all of the project area has been adequately surveyed for cultural resources; (2) whether any known cultural resources have already been recorded on or adjacent to the project area; and (3) whether the

probability is low, moderate, or high that cultural resources are located within the project area. If a proposed project includes ground disturbance and the project site has not been adequately surveyed then field survey by qualified archaeologist is generally required. A reconnaissance level survey may be requested if the project site has a low probability of cultural resources.

Policy Options. If the studies described above determine that no cultural resources are present within the project area, then no further action is needed. If resources are identified, there are several ways to treat and mitigate impacts to these resources. These include preservation through avoidance, site capping (burial), creation of conservation easements and/or data recovery.

C.11 Decommissioning

In order to ensure sites are restored to their pre-development state, local jurisdictions may require the review and approval of a restoration plan for the decommissioning of solar energy facilities at the end of their useful economic life as part of the use permit process. Adopted development standards or use permits may require that all structures, equipment, footings and fencing be removed when the facility is no longer in use. For larger facilities, the local jurisdiction may want a more specific Restoration Plan to be reviewed and approved as part of the permit process. Generally, these would include estimates of costs for restoration and should be based on prevailing wages and allow credit for salvage value of the panels and system materials.

C.12 Financial Assurance

For instances where the ultimate salvage value may not exceed the removal cost, some local agencies may require financial assurance to secure the expense of dismantling and removing the SEF and reclaiming the site should the facility be abandoned. Solar providers have expressed concern that these requirements may be too onerous, particularly for small and medium sized facilities, as they can add substantial costs. The solar industry indicated that requiring financial assurance is not economically feasible for facilities less than 30 acres in size. Because financial assurances can add a significant burden or cost, the need for financial assurances should be evaluated taking into account the location and size of the facility, the term of use of the site as a power generating facility and the potential for future changes in leasehold interests, technology and demand. Additionally, local jurisdictions should consider other similar types of facilities and apply similar standards.

Financial assurances may be required for large projects or if the project is located on publicly owned lands. Financial assurance can be in various forms acceptable to the county, including bonds, letter of credit, trust funds or similar guarantee.

There are several considerations in determining the amount and timing of the financial assurance. One factor is the amount of the assurance based on current cost estimates of salvage value of the panels and system materials, and how to update the cost estimates over time. In some cases, the solar companies have indicated that the ultimate salvage value may exceed the removal cost, resulting in no net cost for decommissioning.

On the issue of the timing of funding an escrow account, consideration can be given to requiring financial assurance prior to operation or funding the account at a time closer to the end of the leasehold or Power Purchase Agreement (PPA) period. The County may determine that a trust fund or escrow account is an acceptable form of financial assurance based on a prorated amount accruing each year toward decommissioning of the solar facility. The trust fund or escrow account should be established prior to issuance of building permits, but at the year designated by the County, the operator would begin putting funds into the account so that the engineer's cost estimate is fully funded by the end of the leasehold period or the useful economic life of the facility.



C.13 Abandoned Facilities

Though SEF are intended to provide a part of the permanent response to the State's energy goals, there is potential for some facilities to be abandoned for a variety of factors. Abandoned facilities can become unsightly and create an attractive nuisance. Abandoned sites can also be expensive to reclaim or redevelop due to the extent of footings and can create an obstacle for reuse of the site and deter economic investment in the area. Counties may have difficulty in enforcement of decommissioning requirements if a clear process for determining when a facility is abandoned is not set out either in local zoning codes or use permit process. **The Model Ordinance (Appendix A) includes provisions for making determinations of abandonment that can either be adopted into local zoning codes or as a condition of approval.**

D. Streamlining the Permit Process

Encouraging the rapid expansion of SEFs is the adopted policy of the State of California, and is supported at the federal level and in many local policies, including county general plans. Nonetheless, the current permit process is frequently

lengthy, uncertain and expensive. Inconsistent processes and requirements from jurisdiction to jurisdiction and between agencies further complicate renewable energy development. In Section C above, streamlining the permit process was identified as a way to deal with the various issues discussed. Streamlining is widely considered a compelling incentive that local government can offer. A faster, more predictable permit process is particularly important in light of the relative newness of the industry, the current economics of SEFs, and concerns regarding the looming impacts of climate change.

There are many other values also supported by State and local policies, including the protection of important environmental resources and agricultural lands and sustaining robust food supplies.

To this end, the goal of the counties should be to promote the development of SEFs while balancing the need to protect important environmental resources and agricultural lands.

Streamlining methods include the adoption of clear standards or special use regulations that address environmental concerns and provide a clear set of guidelines for the solar industry to follow as part of a more predictable approval process. The use of well defined siting criteria as provided in the Model Ordinance or Renewable Energy Combining Zones can potentially provide additional incentives to encourage siting of such facilities in appropriate areas by further reducing the burden on the applicant of costly environmental review and uncertainties with discretionary permit review. Establishing consistent standards and reduced building permit fees, especially for a direct-use SEF, is also a practice used by many communities. Proposed facilities that do not fall within the thresholds or that do not meet the standards may be limited to certain zones and/or require a discretionary use permit process and public hearing.

Streamlining can also occur by dedicating agency staff members to review solar projects, or by giving priority to renewable energy projects, and by allowing applicants to contribute to County costs for outside consultants or specialists to expedite reviews. The local agency can also facilitate permitting of SEF with other responsible agencies by convening interagency meetings to coordinate CEQA review and permit conditions.

The following provides an overview of elements of the permitting process, suggested findings and key issues.

D.1 Project Development

The key for streamlined processing is generally in the project development phase of a project where the applicant should first evaluate site constraints and opportunities. Early consultation with the lead and responsible agencies, utilities and neighbors is important in evaluating a project's feasibility and determining design issues that should be addressed during project development. Preparation of a complete and accurate project description which addresses the SEF and all ancillary improvements such as transmission lines, substations, roads and staging areas is a fundamental step in analyzing an application and expediting the permit process. To that end, it is recommended that the appropriate county planning staff member be contacted early in the process. Most jurisdictions provide application information and forms on their departmental website and an opportunity for early consultation prior to formal submittal of a permit application. After application submittal, it is important to gather comments and information from other responsible agencies that are involved in permitting of the project. Most State and local agencies involved in permitting rely on the CEQA document prepared by the lead agency and local land use agencies can serve an important role in facilitating permitting for solar projects. When a project involves interconnection, counties should engage the CPUC staff to ensure that they are included in the early stages of review and that CPUC issues are addressed in CEQA documents, even though transmission lines and interconnection facilities are not within the local land use authority and may not be completely known by the applicant at the time of preparing the CEQA document.

D.2 Compatibility Findings and Nexus

Use permits may be granted only when the decision-making body makes certain findings supported by substantial evidence that the use, as conditioned, will not be detrimental to the health, safety or general welfare of the community. The findings are prescribed in the applicable zoning and land uses ordinances of the County. Additional findings regarding a project's potential direct, indirect and cumulative impacts are also required under CEQA. Case law requires a clear connection or nexus between a required condition or mitigation and the associated impact caused by the project in question. Required mitigation measures must be roughly proportional to the impact of the project. For example, project applicants are only required to address potentially negative impacts of their projects and cannot be forced to correct preexisting conditions. Notwithstanding these legal standards, project applicants often voluntarily incorporate elements into their project to increase benefits to the local community. Development standards are often incorporated into zoning ordinances in order to provide a more streamlined process for making the compatibility findings and ensuring environmental impacts are mitigated.

D.3 Programmatic Environmental Review for Ordinance Adoption

Environmental review is required under CEQA for both adoption of local ordinances and for discretionary projects that require use permits. SEFs are land-extensive projects — that is they utilize a large land area — that can create substantial visual impacts and impacts to biological resources and agricultural lands. Generally, however, they do not create substantial noise, traffic, air or water quality impacts, other than short-term construction impacts, that other types of power generation create. SEFs can provide substantial long-term benefits to air quality and water supplies compared to alternative land uses.

When an EIR is prepared for adoption of a local ordinance, it is called a “Programmatic EIR.” Subsequent projects can “tier off” the Programmatic EIR and streamline the permit process so long as the Programmatic EIR contains the appropriate level of analysis, mitigation measures, and findings of overriding consideration (where necessary). In order to tier off a Programmatic EIR, an Initial Study is prepared for the SEF by the local agency, which identifies the impacts from the project and how measures in the local ordinance or plan mitigate those impacts and would be applied to the project. If the impacts from the project are adequately addressed in the Programmatic EIR on the ordinance, then the project level review does not need to cover them further. To the extent the Programmatic EIR identified significant unavoidable impacts that were overridden by the decision-making body, subsequent projects that conform to the ordinance can be more readily approved with a mitigated negative declaration, tiered off the earlier findings made in the adoption of the ordinance. The Initial Study incorporates by reference the general discussions from the earlier Programmatic EIR and then focuses the discussion solely on issues specific to the later project. This approach can eliminate repetitive discussions of the same issues.

Evaluating Cumulative Impacts

With the rapid expansion of renewable energy in California, often concentrated in certain regions, the consideration of the cumulative impacts of these is particularly important. However, cumulative impacts are difficult to address and mitigate on a project level. The need to consider these impacts can trigger the requirement that an EIR be prepared to enable the agency to fully review the impacts and implement the necessary mitigation measures and/or consider adopting a statement of overriding considerations if the impacts are unavoidable. According to the CEQA Guidelines, Section 15064(h)(1), an EIR is required if “the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects.” However, even with an EIR, it is difficult to properly mitigate cumulative impacts on a project-by-project basis.

Programmatic EIRs can provide a tool for overcoming this challenge. For this reason most ordinances are designed to be “self-mitigating” by including siting criteria, general standards or special use regulations and defining thresholds for ministerial permits that would be benign in all circumstances. The programmatic EIR can evaluate the impacts of siting a number of projects in accordance with the standards in the ordinance and look at what mitigation measures are necessary to prevent cumulative impacts from occurring. Therefore, when an individual project is proposed in compliance with the ordinance, the possible cumulative effect will have already been considered and mitigated. Projects not proposed in compliance with the ordinance will still need to have their cumulative impacts fully evaluated.

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