

**Environmental Regulatory Permitting and  
Feed-In Tariff RPS Certification**

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# Environmental Regulatory Permitting

## Introduction

The purpose of this section is to present a general discussion of the key environmental permits and related environmental permitting challenges associated with the development of the hydroelectric development options. Detailed assessments will be required once specific projects have been selected for implementation and agencies have been consulted.

The section begins with a general overview of the various types of permits and approvals typically associated with the development of hydroelectric facilities followed by tables that summarize the likely environmental permitting requirements for each project.

### C1. Overview of the Environmental Regulatory Process and Permits

Listed below are the general types of environmental regulatory review processes and permits associated with development of hydroelectric projects. Depending on the selected option, some projects may require all or many of these steps while others may require only a few. The following list is intended to follow the general sequencing and timeline of the primary processes and permits associated with the development of hydroelectric facilities.

- Initiate FERC license process. This may involve a conduit exemption or small hydropower project license exemption (for projects 5 megawatts or less), an amendment to an existing license, or new (minor or major) license. This process will be subject to mandatory terms and conditions set by federal and state fish and wildlife agencies (e.g., U. S. Forest Service Section 4(e) Conditions).
- Project Proponent (e.g., EID, GDPUD, STPUD, or other State Lead Agency) to prepare California Environmental Quality Act (CEQA) documentation.
- Federal Lead Agency (e.g., FERC) to complete required National Environmental Policy Act (NEPA) documentation (e.g., Environmental Assessment (EA) or Environmental Impact Statement) (EIS)).
- The USFS may prepare a Supplemental NEPA EA for FERC License/License Amendment activities on USFS lands.
- State Water Resources Control Board (SWRCB) may issue Clean Water Act Section 401 Water Quality Certification or Waiver with mandatory conditions. The SWRCB may also process and authorize applications for changes in points of diversion or use of existing rights and potential new water rights.
- Potential permits may include: USFS Federal Land Policy and Management Act Consistency Review and Special Use Permit, Nationwide or Individual Permit (U.S. Army Corps of Engineers Clean Water Act, Section 404), Streambed Alteration Agreement (Fish and Game Code, Section 1601), Endangered Species Act Section 7 Consultation (USFWS and NMFS), Section 106 consultation under the National Historic Preservation Act, Regional Water Quality Control Board (RWQCB) to issue Waste Discharge Requirements (WDRs),

- National Pollutant Discharge Elimination System (NPDES) Permit, and General Construction Activity Permits based on water quality control plans prepared by Project Proponent.
- Submit application to the California Energy Commission for renewable energy certification. The CPUC concurrence action is required for small hydroelectric projects (less than 30 MW) to qualify as a renewable resource and FIT projects less than 1.5 MW to qualify for “must-take” FIT contracts with investor owned utilities such as PG&E
  - Private landowner easement and approved agreements related to use of USFS/private roads and lands.

The relatively large-scale projects (e.g., Alder Creek Dam) would likely require a series of approvals and permits as noted above. However, the smaller projects with a relatively minor project footprint (e.g., Low-High Flow Energy Recovery at PH) may involve only a few of the steps noted above. The following paragraphs provide more detailed descriptions of the agency permitting and approval processes. The construction and operation of hydroelectric facilities may require reviews and approvals from multiple federal and state authorities and also some local and private entities. Each entity and the associated permits that are likely to be required are discussed below.

## C2 Permitting Overview

### C2.1 Project Proponent and/or CEQA Lead Agency

As a public agency, the project proponent (e.g., EID, GDPUD, or EDCWA) will act as CEQA Lead Agency for complying with CEQA documentation and public review requirements. This may involve preparation of an Environmental Impact Report (EIR), Negative Declaration or Categorical Exemption. The CEQA process will be coordinated with State and local agencies that have permit and other review/approval authority (i.e., responsible agencies) so that CEQA requirements are simultaneously satisfied for the responsible State/local agencies that will issue permits.

There are several approaches that the Project Proponent could follow to satisfy CEQA requirements. The considerations listed below will be important to selecting the best approach:

- Will the project design largely be finalized before initiating the CEQA review process, or will the project proponent consider alternative design/remediation options through the CEQA process?
- Can the environmental impacts be mitigated to below a level of significance, thereby allowing for a Mitigated Negative Declaration (MND) instead of an EIR?
- Are the permitting and other review/approval agencies expected to readily concur with the design and mitigation measures, or will other agencies identify design or other project component alternatives to be evaluated during the CEQA process?

Taking the hydroelectric development options under consideration earlier rather than later and selecting a specific project and determining that all potential environmental impacts can be mitigated will allow the CEQA Lead Agency to complete a shorter duration CEQA MND process. However, if the CEQA Lead Agency has not yet decided on the project design this could lengthen the duration of the CEQA EIR process. In this instance, a combined State/Federal EIR/EA environmental document and review process would likely be most efficient.

## C2.2 Federal Agency Requirements

There are several federal agencies that could have applicable permit/review requirements to any development option: FERC, United States Army Corps of Engineers (USACE), United States Fish and Wildlife Service (USFWS), and USFS. The Bureau of Reclamation and the Bureau of Land Management may have jurisdiction as well, depending on the project location. Prior to the commencement of construction, these federal agencies will need to issue permits and approvals, and complete associated public review processes for construction and operational activities. The governing regulations and document requirements of each agency are discussed below.

Compliance with NEPA and the Federal Power Act are potentially the most onerous and time consuming federal environmental regulatory requirements associated with each option, especially for projects that include water storage at undeveloped sites (e.g., Alder Reservoir options).

It is likely that FERC will serve as the lead federal agency to comply with NEPA. The FERC license application process (see below) includes a detailed environmental assessment and agency scoping process. The results of this analysis will guide the NEPA requirements. If the environmental analysis determines that a project is likely to have significant impacts to biological and/or archaeological resources, then the FERC may compile an NEPA Environmental Assessment. However, most projects that meet the criteria for a license exemption have a small project footprint and do not necessarily require a lengthy NEPA document. The FERC NEPA document will be limited to address only those issues of concern as noted in the environmental section of the license application (FERC pers. comm. 2008).

**FEDERAL ENERGY REGULATORY COMMISSION:** FERC is the clearing house for all non-federal hydroelectric projects in the United States. FERC jurisdiction over hydroelectric power projects is guided by the Federal Power Act (FPA) and as Federal Lead Agency for NEPA.

The FPA authorizes FERC to grant licenses and exemptions for the purpose of “constructing, operating, and maintaining dams, water conduits, reservoirs, power houses, transmission lines for the development, transmission, and utilization of power across, along, from or in any of the streams or other bodies of water over which Congress has jurisdiction”. Following is a brief summary of the different types of FERC license processes.

If there is an existing FERC license, this license must be amended to allow construction and operation of the selected option. FERC regulations classify license amendments as either capacity-related amendments or non-capacity-related amendments. Capacity-related amendments include applications for hydropower projects that involve additional generating capacity not previously authorized, and that: (1) would increase the actual or proposed total installed capacity of the project; (2) would result in an increase in the maximum hydraulic capacity of the project of 15 percent or more; AND (3) would result in an increase in the installed nameplate capacity of 2 MW or more (see 18 CFR 4.201(b)). Amendment applications that do not meet the above criteria are classified as non-capacity related amendments.

In general, the information and consultation requirements for non-capacity-related amendment projects are less rigorous than capacity related amendment projects (see 18 CFR 4.38). Nevertheless, an amendment application must include those exhibits that are affected by the proposed project modifications. Also, an amendment must include a review of the draft amendment application by the appropriate resource agencies. The agencies must be allowed a minimum of 60 days to review the draft application, after which the applicant may finalize the amendment application and submit it to FERC. For planning purposes, a 12 to 24 month FERC review process should be assumed, although amendments for non-controversial or projects with minimal environmental impacts may be issued sooner.

In certain cases, hydroelectric projects may qualify for an exemption from FERC licensing. The process of getting an exemption is typically simpler than applying for a new license. Those receiving an exemption are exempt from Part I of the Federal Power Act. However, the exempted project is subject to mandatory terms and conditions set by the federal and state fish and wildlife agencies and by the Commission and do not convey the right of eminent domain.

The Commission issues two types of exemptions:

- 1) Small hydropower projects, which are 5 MW or less, that will be built at an existing dam, or projects that utilize a natural water feature for head or an existing project that has a capacity of 5 MW or less and proposes to increase capacity, or,
- 2) Conduit exemption that would be issued for constructing a hydropower project on an existing conduit (for example irrigation canal). Conduit exemptions are authorized for generating capacities 15 MW or less for non-municipal and 40 MW or less for a municipal project. The conduit has to have been constructed primarily for purposes other than power production and be located entirely on non-federal lands.

The majority of the hydroelectric projects identified in this study would likely qualify for the conduit exemption and/or small hydropower license exemption. The Small Alder Project would likely involve an amendment to license.

U. S. ARMY CORPS OF ENGINEERS: USACE may authorize activities under Section 404 of the Clean Water Act (CWA). Section 404 of the CWA requires a permit from the USACE for any discharge of dredge or fill materials, temporary or permanent, into any Waters of the U. S., including wetlands. Dependent upon the extent of the proposed impact, the USACE will authorize activities under either a Nationwide Permit (NWP) or Individual Permit. NWPs were established to allow the USACE to grant general permits for similar categories of discharges that will have only minimal adverse effects. Individual permits are issued for projects that are greater than, or include activities not specified within, the scope and threshold limitations of NWPs. The USACE will review proposed activities with respect to their potential impacts on wetlands, threatened or endangered species under Section 7 of the ESA, and cultural resources and historic properties under Section 106 of the NHPA, prior to issuing a NWP or an Individual Permit. If a permit is required and if there is a potential to disturb any cultural resources, a cultural resources report will be required, which meets the federal standard for documenting cultural resources (different from the CEQA standard).

A NWP may be required for certain options, but not others. Regardless of the selected development option and final design, consultation with USACE will likely be required, but USACE permitting may not be necessary. For example, options that will include crossing a stream; building near a stream, lake, or wetland; will likely require a NWP (NWP #17 for Hydropower Projects).

U. S. FISH AND WILDLIFE SERVICE: A discretionary action by federal agencies requires consultation with the U. S. Fish and Wildlife Service (USFWS). The purpose of the consultation is to determine the potential for protected or other special-status species and associated habitats to occur in the project area, determine the nature and extent of potential adverse impacts to fish and wildlife species, and identify appropriate mitigation measures. Further consultations and possibly additional environmental studies may be required depending on whether there is potential for protected or other special-status species to be affected by the project.

US FOREST SERVICE: The USFS will likely require permits/approvals for options on or affecting National Forest System lands. These include Federal Power Act, land use and right-of-way authorizations. The USFS may identify license (4(e) conditions and 10(a) recommendations) during the FERC license process. The USFS may also issue a Special Use Permit for construction-related activities on USFS lands. Because there is a difference in USFS jurisdiction between lands within the FERC license boundary and lands outside of the license boundary, separate USFS permits and other authorizations will be required. Examples of the types of activities that will require USFS approval outside of the FERC license boundaries include:

- construction/helicopter staging areas,
- stockpile areas,
- equipment hauling and placement on USFS roads,
- helicopter fly zones (including seasonal and geographic restrictions) over USFS lands, and
- Reopening of temporary construction access roads.

The existing FERC license for some projects include several 4(e) conditions that will affect the scope, design, operation, and maintenance of the development options.

### C2.3 State Agency Requirements

There are six primary State agencies that will have applicable review and/or permit/approval requirements for most hydroelectric development options: State Water Resources Control Board (SWRCB), Regional Water Quality Control Board, California Department of Fish and Game (CDFG), the State Office of Historic Preservation (as represented by the State Historic Preservation Officer or SHPO, California Energy Commission (CEC) and the California Public Utilities Commission (CPUC) as discussed above). During the CEQA review process, these state agencies will be consulted, and then following completion of CEQA, applications/requests will be submitted for specific permits, approvals, and review processes.

**STATE WATER RESOURCES CONTROL BOARD:** The EPA delegated the State Water Resources Control Board (SWRCB) Federal authority for the Clean Water Act (CWA) in California. As an example, for Project 184, the SWRCB has been responsible for the issuance of CWA Section 401 Water Quality Certifications (WQC) or Waivers. Section 402 of the CWA and associated National Pollutant Discharge Elimination System (NPDES) Permits have been administered by the Regional Water Quality Control Board as described below.

CWA Section 401 requires that a WQC be obtained or waived before a federal agency issues a permit for an activity that may result in a discharge into state waters. CWA Section 401 WQC therefore is necessary for USACE Individual and NWP. However, the State of California has pre-certified a number of NWPs for all of California, subject to conditions and notification requirements.

**REGIONAL WATER QUALITY CONTROL BOARD:** Depending on the development option, RWQCB permits may be required. Some permits fall under Section 402 of the CWA and involve NPDES permits, and others fall under the RWQCB authority over Waste Discharge Requirements that include solid (i.e., tunnel rock) wastes.

Similar to CWA Section 401 authority of the SWRCB, the authority to administer the CWA Section 402 NPDES permit program was delegated to and is held by the RWQCB. NPDES permits provide authorization to discharge pollutants into waters of the United States from point sources.

NPDES General Construction Activity Storm Water Permits may be required for construction, and apply to activities that may result in soil disturbances of at least one acre of total land area, including off-site staging areas or material storage areas. Storm Water Pollution Prevention Plans (SWPPP) are required by the Construction Storm Water Permits.

In addition to the above, and depending on the qualifications of hazardous substances, the RWQCB may require Spill Prevention and Containment Response Plans for storage, handling, and use of hazardous materials that include fuel, chemicals, and equipment lubricants and coolants.

CALIFORNIA DEPARTMENT OF FISH AND GAME: The crossing or encroachment into a pond or lake or stream, either during construction or as a permanent installation, will require the submittal of a Streambed/Lakebed Alteration Agreement (CDFG Section 1602) for approval by CDFG. The primary concern is generally the changes to stream flows, changes to water quality, and physical (habitat) impacts associated with the project construction and/or operation within the stream or lake zone.

STATE OFFICE OF HISTORIC PRESERVATION: Federal discretionary actions such as those issued by the USACE will be pre-conditioned upon completion of a review under Section 106 of the Federal National Historic Preservation Act of 1966 (NHPA). Typically, the State Historic Preservation Officer (SHPO) is contacted to determine the nature and extent of potential adverse impacts to historic or cultural sites at a construction site.

NHPA Section 106 regulations require that any project take into account the effects on historic properties in the area that are eligible or potentially eligible for listing on the National Register of Historic Places.

CALIFORNIA ENERGY COMMISSION: The Overall Program Guidebook (CEC 2008, Guidebook) describes specific aspects of how the California Energy Commission's Renewable Energy Program is administered and the guidebook outlines terms and definitions. The Guidebook also addresses aspects related to California's Renewables Portfolio Standard (RPS), which has a goal of obtaining 20 percent of the state's electricity from renewable resources by the year 2010. These Guidelines assist interested applicants in applying for Renewable Energy Program funds and RPS Certification. Individuals and entities are eligible for program funding and RPS certification if they satisfy the eligibility requirements specified in the program element guidebooks.

To qualify for funding or RPS certification, eligible individuals and entities must apply to the Commission as specified in the applicable program element guidebook. RPS Certification verifies that an applicant is certified by the Commission as eligible toward meeting the state's Renewables Portfolio Standard pursuant to Public Utilities Code Sections 399.12 and 399.13 and Public Resources Code Section 25741. Section C3 explains the key steps and information required for RPS certification and pre-certification for FIT projects.

CALIFORNIA PUBLIC UTILITIES COMMISSION: AB 1969, approved on September 29, 2006, adds Section 399.20 to the Public Utilities (PU) Code which requires all electrical corporations to file with the CPUC a standard tariff (i.e., FIT) to provide payment for every kilowatt hour (kWh) of renewable energy output produced at an electric

generation facility at the market price determined by the CPUC for a period of 10, 15, or 20 years. For purposes of Section 399.20, an eligible generation facility must be an eligible renewable energy resource owned and operated by a public water or wastewater agency that is a retail customer of the electric utility (e.g., PG&E), interconnected and operated in parallel with the utility's transmission and distribution system, and be sized to offset part or all of the electric demand of the public agency.

Section 399.20 limits payment to eligible facilities to a cumulative rated generating capacity of 250 MW statewide. Service will be available upon request on a first-come-first-served basis until the utility meets its proportionate share (i.e., about 105 MW allocated for water and wastewater facilities for PG&E) of the statewide limit.

The RPS Guidebook (CEC 2008) states that to qualify for the FIT program and other renewable energy incentives, an RPS-eligible small hydroelectric facility or conduit hydroelectric facility must not exceed 30 MW and must meet certain other criteria. In addition to a certification or pre-certification application applicants for small hydroelectric facilities or conduit hydroelectric facilities must complete a supplemental application form and provide additional required information. The requirements are described in greater detail below.

**OTHER STATE PERMITS:** In addition to the permits discussed above, construction activities may require one or more Encroachment Permits from the California Department of Transportation and possibly the California Highway Patrol for traffic controls and signage, special equipment hauling, helicopter overflights, and transport of explosives on Highway 50.

#### C2.4 Local Agency Requirements

Several environmental reviews, permits and approvals may be required by El Dorado County. The County may conduct a land use consistency review to determine if the project is consistent with zoning and land use planning outlined in the El Dorado County General Plan. Prior to the commencement of construction, consultation with local agencies will be required to determine the building permits, approvals, and associated processes that will be required for construction and operational activities. A preliminary review of permits that may be required from the County includes a Blasting Permit and Emergency Generator Air Quality Permit should construction require blasting or the use of generator. In addition, the County Office of Emergency Services may require that a permit be obtained prior to construction activities involving blasting.

#### C3. Applying for RPS Certification and Pre-Certification for FIT Projects

Before PG&E or other investor owned utility can purchase renewable energy from a qualified hydroelectric project, the CEC must certify that the project meets Renewable Portfolio Standard as defined by PU Code 399.20. This section summarizes the steps from pre-certification and certification. Pre-certification is advisable prior to submitting a FIT contract to PG&E or other IOU.

- Submit a completed application, along with necessary supporting documentation, to the CEC at the address shown on the form.
- Provisional or “pre-certification” as an eligible renewable resource is available for applicants whose facilities are not yet on-line. Applicants seeking pre-certification must complete Form CEC-RPS-1B, indicate their desire to be pre-certified on their completed CEC-RPS-1B form, and submit all required supplemental information, as described below, to the extent that information is available.
- If the additional required information is not available at the time of precertification because of the facility’s stage of development, then the applicant must explain this in its application and identify the missing information and the date(s) when the information is expected to be available.
- Facilities that are pre-certified must submit a complete and updated certification application (CEC-RPS-1A) with all additional required information and be certified as RPS-eligible before any of its generation may be counted toward satisfying a retail seller’s RPS procurement requirements.
- The Energy Commission will notify applicants in writing of its determination on the application for certification. If the application for certification or pre-certification is approved, the Energy Commission will issue a certificate stating that the facility is certified or pre-certified as eligible for the RPS.
- The certificate will not include an expiration date and will remain in effect for the life of the facility.
- For applicants that must submit additional required information, such as biofuels, hydroelectric, or out-of-state facilities, the Energy Commission must conduct an extensive review of the additional data. Review of these applications will require a minimum of 30 days from when the Energy Commission receives a complete application. The 30-day clock starts on the date a complete application is date-stamped by the Energy Commission as received and the Executive Director makes a determination on any related applications for confidential designation. After completing its review, the Energy Commission will either notify the applicant of its proposed determination or will request additional information from the applicant.

The following instructions apply to applications for hydroelectric facilities. The additional required information described below must be submitted as an attachment to the applicant’s completed CEC-RPS-1A or CEC-RPS-1B form, along with the appropriate supplement form, if applicable.

- An applicant must provide additional information to substantiate its self-certification that a small hydroelectric facility, conduit hydroelectric facility, or

incremental generation from efficiency improvements to hydroelectric facilities regardless of overall facility size is eligible for the RPS if the facility:

- 1) Commenced commercial operations or was repowered on or after January 1, 2006, for small or conduit hydroelectric facilities.
  - 2) Commenced commercial operations before January 1, 2007, for incremental generation from efficiency improvements regardless of facility size.
  - 3) Was added to an existing water conduit on or after January 1, 2006, for conduit hydroelectric facilities.
- Additional required water-use data and documentation described below must be attached to a completed CEC-RPS-1A (for certification) or CEC-RPS-1B (for precertification) form. These requirements apply to facilities located within California. Applicants possessing a permit or license from the State Water Resources Control Board (SWRCB) must submit a copy of the permit or license as well as the application for the permit or license.
- 1) Name of the Facility
  - 2) Ownership of the Facility
  - 3) Source Water Description (see RPS Eligibility Commission Guidebook for details)
    - The application must identify the source of the water for the hydroelectric project. The source must be characterized as surface, groundwater, or other (for example, recycled water).
    - For surface water sources, a map at a scale of 1:24,000 must be provided. The map should also identify the location of the diversion point and all other facilities. In addition, a written description of the location of the diversion should be provided (county and nearest city) as well as the name of the body of water at the point of diversion.
  - 4) Water Rights
    - Applicants must clearly establish their right to divert water by submitting all necessary information as well as all appropriate licenses or permits.
    - This information must identify the permitted volume, rate, and timing of water diversions, the place of diversion, and beneficial uses. This may be achieved through submittal of the appropriate SWRCB appropriation permit or license, or the Statement of Water Diversion and Use filed with SWRCB.
    - For diversions not subject to an appropriation permit or license, a copy of any Statement of Water Diversion and Use filed with SWRCB should be provided.
  - 5) Hydrologic Data
    - The applicant must submit appropriation and/or diversion data for the last five years or for the period of operation if the project has been operating less than five years. Information contained in any legally required reports may be used to meet this requirement if sufficient information is included in the report. For other

projects, the hydrologic data submitted must be accompanied by a description of how the data is collected. Flow data shall be provided at the frequency set forth in the applicable water appropriation permit; for example, if the permit specifies minimum and maximum flows on a monthly basis that is the level of information necessary to be submitted.

6) Other Permits

- The applicant must submit all other applicable permits, including those permits and exemptions issued by the Federal Energy Regulatory Commission (FERC).

7) Environmental Documentation

- The applicant must submit copies of any permits, agreements, contracts, or other requirements affecting the operation of the facility, especially those that affect the volume, rate, timing, temperature, turbidity, and dissolved oxygen content of the stream water before and after the points of diversion.

8) Capacity

- For small and conduit hydroelectric facilities, the applicant must demonstrate how the project will comply with the 30 MW size limitations under the RPS and not cause an adverse impact on instream beneficial uses or a change in the volume or timing of streamflow. For this purpose, a facility may have an adverse impact on the instream beneficial uses if it causes an adverse change in the chemical, physical, or biological characteristics of water.

*Please note that CEC has detailed submission requirements for the items listed above; therefore, it is important to review these requirements in the CEC Renewable Portfolio Standard Eligibility Commission Guidebook (Third Edition) dated January 2008.*