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are allocated among the project functions according to each function's percentage of the total remaining benefits.

- (7) Specific power cost means that portion of the headwater project costs that is directly attributable to the function of power generation at the headwater project, including, but not limited to, the cost of the electric generators, turbines, penstocks, and substation.
- (8) Joint-use power cost means the portion of the joint-use cost allocated to the power function of the project.
- (9) Section 10(f) costs means the annual interest, depreciation, and maintenance expense portion of the jointuse power cost, including costs of nonpower functions required by statute to be paid by revenues from the power function.
 - (10) Party means:
- (i) The owner of a non-Federal downstream hydroelectric project which is directly benefited by a headwater project constructed by the United States, a licensee, or a pre-1920 permittee;
- (ii) The owner of a headwater project constructed by the United States, a licensee, or a pre-1920 permittee;
- (iii) An operating agency of, or an agency marketing power from, a headwater project constructed by the United States; or
- (iv) Any party, as defined in §385.102(c) of this chapter.
- (11) Final charge means a charge assessed on an annual basis to recover section 10(f) costs and which represents the final determination of the charge for the period for which headwater benefits are assessed. Final charges may be established retroactively, to finalize an interim charge, or prospectively.
- (12) Interim charge means a charge assessed to recover section 10(f) costs for a specified period of headwater benefits pending determination of a final charge for that period.
 - (13) *Investment cost* means the sum of:
- (i) Project construction costs, including cost of land, labor and materials, cost of pre- and post-authorization investigations, and cost of engineering, supervision, and administration during construction of the project; and

(ii) Interest during construction.

[Order 453, 51 FR 24318, July 3, 1986, as amended by Order 699, 72 FR 45324, Aug. 14, 2007]

§11.11 Energy gains method of determining headwater benefits charges.

- (a) Applicability. This section applies to any determination of headwater benefits charges, unless:
- (1) The Commission has approved headwater benefits charges pursuant to an existing coordination agreement among the parties;
- (2) The parties reach, and the Commission approves, a settlement with respect to headwater benefits charges, pursuant to §11.14(a) of this subpart; or
- (3) Charges may be assessed under §11.14(b).
- (b) General rule—(1) Summary. Except as provided in paragraph (b)(3) of this section, a headwater benefits charge for a downstream project is determined under this subpart by apportioning the section 10(f) costs of the headwater project among the headwater project and all downstream projects that are not exempt from or waived from headwater benefits charges under §11.10(b) of this chapter, according to each project's share of the total energy benefits to those projects resulting from the headwater project.
- (2) Calculation; headwater benefits formula. The annual headwater benefits charge for a downstream project is derived by multiplying the section 10(f) cost by the ratio of the energy gains received by the downstream project to the sum of total energy gains received by all downstream projects (except those projects specified in §11.10(b) of this chapter) plus the energy generated at the headwater project that is assigned to the joint-use power cost, as follows:

$$P = C_p \times \frac{E_n}{E_i + E_d}$$

In which:

- P=annual payment to be made for headwater benefits received by a downstream project,
- C_p =annual section 10(f) cost of the headwater project.
- E_n =annual energy gains received at a downstream project, or group of projects if owned by one entity,

 E_d =annual energy gains received at all downstream projects (except those specified in §11.10(b) of this chapter), and

 E_j =portion of the annual energy generated at the headwater project assigned to the joint-use power cost.

- (3) If power generation is not a function of the headwater project, section 10(f) costs will be apportioned only among the downstream projects.
- (4) If the headwater project is constructed after the downstream project, liability for headwater benefits charges will accrue beginning on the day on which any energy losses at the downstream project due to filling the headwater reservoir have been offset by subsequent energy gains. If the headwater project is constructed prior to the downstream project, liability for headwater benefits charges will accrue beginning on the day on which benefits are first realized by the downstream project.
- (5) No final charge assessed by the Commission under this subpart may exceed 85 percent of the value of the energy gains. If a party demonstrates, within the time specified in §11.17(b)(3) for response to a preliminary assessment, that any final charge assessed under this subpart, not including the cost of the investigation assessed under §11.17(c), exceeds 85 percent of the value of the energy gains provided to the downstream project for the period for which the charge is assessed, the Commission will reduce the charge to not more than 85 percent of the value. For purposes of this paragraph, the value of the energy gains is the cost of obtaining an equivalent amount of electricity from the most likely alternative source during the period for which the charge is assessed.

§ 11.12 Determination of section 10(f) costs.

(a) for non-Federal headwater projects. If the headwater project was constructed by a licensee or pre-1920 permittee and a party requests the Commission to determine charges, the Commission will determine on a caseby-case basis what portion of the annual interest, maintenance, and depreciation costs of the headwater project constitutes the section 10(f) costs, for purposes of this subpart.

- (b) For Federal headwater projects. (1) If the headwater project was constructed or is operated by the United States, and the Commission has not approved a settlement between the downstream project owner and the headwater project owner, the section 10(f) cost will be determined by deriving, from information provided by the headwater project owner pursuant to §11.16 of this subpart, the joint-use power cost and the portion of the annual joint-use power cost that represents the interest, maintenance, and depreciation costs of the project.
- (2) If power is not an authorized function of the headwater project, the section 10(f) cost is the annual interest, maintenance, and depreciation portion of the headwater project costs designated as the joint-use power cost, derived by deeming a power function at the project. The value of the benefits assigned to the deemed power function, for purposes of determining the value of remaining benefits of the joint-use power cost, is the total value of downstream energy gains included in the headwater benefits formula.
- (3) For purposes of this paragraph, total value of downstream energy gains means the lesser of:
- (i) The cost of generating an equivalent amount of electricity at the most likely alternative facility at the time the headwater project became operational; or
- (ii) The incremental cost of installing electrical generation at the headwater project at the time the project became operational.

§11.13 Energy gains calculations.

(a) Energy gains at a downstream project. (1) Energy gains at a downstream project are determined by simulating operation of the downstream project with and without the effects of the headwater project. Except for determinations which are not complex or in which headwater benefits are expected to be small, calculations will be made by application of the Headwater Benefits Energy Gains Model, as presented in The Headwater Benefits Energy Gains (HWBEG) Model Description and Users Manual, which is available for the