



United States Department of the Interior
WATER AND POWER RESOURCES SERVICE
BUREAU OF RECLAMATION
WASHINGTON, D.C. 20240

IN REPLY
REFER TO: 115
911.

MAR 26 1980

Memorandum

To: Administrator
Western Area Power Administration

✓ Commissioner
Water and Power Resources Service

From: Deputy Administrator
Western Area Power Administration

Assistant Commissioner
Water and Power Resources Service

W. M. H. Clayton

[Signature]

Subject: Transfer of Functions and Property as per P.L. 95-91

Our February 27, 1980, memorandum to you transmitted the master agreement on performance of functions reached by the joint task force in accordance with your November 26, 1979, memorandum. The agreement has since been reviewed by the Regional, Area, and other offices in each agency. A number of comments were offered to the task force which we have jointly reviewed. As a result, some minor changes have been made in the agreement which we now forward for your signature. None of these changes impact the agreements reached on transfer of property. We have been advised by the Regional Directors and Area Managers that the Region/Area agreements are in compliance with this master agreement.

We suggest you jointly sign the master agreement as soon as convenient.

Our February 27, 1980, memorandum pointed out that the master agreement does not address the accounting or disposition of revenues from the power marketing activity and indicated that both the existing legislation and proposed revolving fund legislation give adequate direction and assurances on this matter. Currently, there are a number of informal operations and agreements at the Region/Area level which interpret and implement these legislative guidelines. Several Regional Directors have requested that a formal agreement be reached covering disposition of revenues, transfer of account balances, and other accounting matters. We

believe that, for the long term, an agreement covering finance and accounting matters needs to be developed and that the sooner such an agreement is developed the better the relationship between the agencies will be. We suggest you discuss this matter with the appropriate staff of each agency at an early date.

Enclosure

AGREEMENT BETWEEN
WATER AND POWER RESOURCES SERVICE
DEPARTMENT OF THE INTERIOR

AND

WESTERN AREA POWER ADMINISTRATION
DEPARTMENT OF ENERGY

THIS AGREEMENT is entered into and effective this 26th day of March 1980, between the Water and Power Resources Service (hereinafter called the Service), represented by the Commissioner, and the Western Area Power Administration (hereinafter called Western), represented by the Administrator,

WITNESSETH:

WHEREAS: Public Law 95-91 transferred the power marketing function of the Service to Western, including the construction, operation and maintenance of transmission lines and attendant facilities; and

WHEREAS: The intent of this agreement is to implement the principles agreed to by the Commissioner and the Administrator in their memorandum dated November 26, 1979, concerning the transfer of functions and property as per Public Law 95-91; and

WHEREAS: The Service and Western wish to define each agency's responsibilities with respect to that part of the Federal power system referenced in Public Law 95-91; and

WHEREAS: The Service and Western wish to operate the Federal power system in the most efficient manner and to avoid duplication of manpower, functions, and facilities; and

WHEREAS: The Service and Western wish to optimize power benefits while preserving other project benefits; and

NOW, THEREFORE, the parties hereto agree as follows:

1. Responsibility of the Service

The Service has responsibility for planning, designing, constructing, operation, and maintenance of hydro and other forms of electrical power generation as authorized by the Congress.

The Service also has responsibility for water release scheduling and for operational control of all generator units. However, the Service will provide opportunity for Western input to water release decisions and, to the extent practicable, provide to Western generator operative parameters so as to allow Western to optimize the utilization of power resources.

2. Responsibility of Western

Western has responsibility for planning, designing, construction, operation and maintenance of the transmission system, marketing the Federal power and setting power rates to assure that revenues are sufficient to accomplish repayment of all the allocated investment.

Western is also responsible for all power dispatch functions. This includes operations such as the assignment of load to specific generating stations and other sources of supply to effect the most reliable and economical supply as the total of significant area loads rise or fall, provided this can be done within water and operating constraints set by the Service; the control of operation and maintenance of high-voltage lines, substations, and equipment, including administration of safety procedures; the operation of principal tielines and switching; and the scheduling of energy transactions with connecting electric utilities.

Western will provide transmission, switching, necessary wheeling arrangements, and substation service for the Service's projects for all power including project use power, except at some isolated locations and in special circumstances as agreed to by both parties. Western will deliver project power as required by the Service. ←

3. Availability of Energy

All power and energy generated by the Service in excess of the Service's project loads and station service requirements shall be available to Western for marketing in accordance with applicable congressional authorizations, laws, and regulations.

The Service shall operate the generating plants so as to schedule and to make available electric power and energy as requested by Western, provided that compliance with such request and the operation of the generating plants:

- would not require the safe limits of the generating, transforming, and switching facilities and appurtenant equipment of said generating plants to be exceeded, or otherwise cause damage to the same;

- would not conflict with requirements for the operation of said generating plants with regard to flood control, navigation, irrigation, or with other such purposes as associated Service projects are to serve;
- would avoid, insofar as practicable, harmful effects on downstream activities and interests.

Provided, however, such operation shall be subject to temporary interruption or reductions in the availability of the electric power and energy when, in the opinion of the Service a generating plant requires maintenance, replacement, installation of equipment or investigation and inspection.

The use by the Service of electric power and energy required for project loads and station service use and the outages contemplated above shall be scheduled in advance so that there will be a minimum of interference with the delivery of electric power and energy to Western for marketing.

4. Exhibits

In order to provide for the optimum effectiveness of the Federal power system, the Service and Western have established policies related to the coordination of their activities in areas of mutual interest. These policies are stated in the following exhibits:

<u>Exhibit</u>	<u>Title</u>
A	Power Planning
B	Design and Construction
C	Budgeting and Program Control
D	Research, Laboratory, and Testing Services
E	Project Use Power
F	Power System Operations
G	Power Repayment Studies

The exhibits are attached hereto and hereby made a part of this agreement.

5. Jurisdiction of Lands

The title to all of the lands and rights-of-way involved in this agreement are in the United States. The Commissioner and the Administrator have agreed on an appropriate listing of facilities that will transfer from Service to Western in accordance with Public Law 95-91. This listing has been prepared for inclusion in an Office of Management and Budget determination order that will effect the transfer of the facilities. The Service will transfer jurisdiction of the lands and rights-of-way to Western relating to the transferred facilities. It is agreed that both agencies will aggressively pursue the development of appropriate descriptions for the transferred land and right-of-way.

4

The exception to transfer all of the Service's interest involves, but is not limited to, transmission lines and access roads that occupy land and land rights that are still required by the Service for its project purposes. Examples are transmission lines along canal right-of-way or across land around reservoirs, and specific provisions included in the Determination Order listing filed with OMB on March 10, 1980. In these cases, Western will be permitted to utilize the Service's reserved land and land rights for the purpose of access, construction, modification, and operation and maintenance of the transmission system as provided in Area/Region agreements.

Since the transfer of substations and switchyards will include sufficient land for future expansion, for appropriate access, and for buffer zones around these facilities, it is agreed that when practical to do so, these areas will be described by aliquot parts of sections rather than using surveyed legal descriptions. Surveys might be required where a transferred facility is so close to a non-transferred facility that an on-site line of demarcation needs to be established.

It is recognized that, due to the integrated nature of the Service's and Western's power facilities, future transfers and/or exchanges of land and land rights may be appropriate. It is agreed that Western and the Service will cooperate to the fullest in the accomplishment of these future land transfers and exchanges.

6. Cooperation

Either the Service or Western may request the other to furnish personnel, materials, tools, and equipment. The party so requested will cooperate with the other and render such assistance as the party so requested may determine to be available. Reimbursement for such cooperation shall be in accordance with provisions of exhibit C.

7. Central Arizona Project Transmission Facilities and Navajo Generating Station

This agreement recognizes and endorses the February 28, 1980, agreement on Navajo Generating Station reached between the Regional Director of the Lower Colorado Region and the Boulder City Area Manager. It is further agreed that ownership and control of the CAP transmission facilities and the United States share of the Navajo Project will remain in Federal ownership and will not be transferred to any other entity in the future.

8. Uncontrollable Forces

Neither party shall be considered to be in default in respect to any obligation hereunder if prevented from fulfilling such obligation by reason of uncontrollable forces, the term "uncontrollable forces" for the purpose of this agreement shall mean any cause beyond the control of the party affected, including but not limited to flood, earthquake, storm, lightning, fire,

epidemic, war, riot, civil disturbance, labor disturbance, sabotage, and restraint by court or public authority, which uncontrollable forces, by exercise of due diligence and foresight, such party could not reasonably have been expected to avoid. Either party rendered unable to fulfill any obligation by reason of uncontrollable forces shall exercise due diligence to remove such inability with all reasonable dispatch.

9. Continuation of Agreement


It is the intention of the Service and Western that this agreement shall continue in effect so long as there are mutual benefits to be derived hereunder. Should there be a change in legislation affecting the parties, or should there be a significant change in circumstances affecting the benefits derived hereunder, the parties will provide notice and negotiate appropriate changes in the terms of this agreement. Until changes are mutually established or until the parties determine that a change cannot be mutually agreed upon, this agreement shall continue in full force and effect.

IN WITNESS WHEREOF, the parties hereto have executed this agreement on the day first above written.

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR

By 
Commissioner
Water and Power Resources Service

UNITED STATES OF AMERICA
DEPARTMENT OF ENERGY

By 
Administrator
Western Area Power Administration

POWER PLANNING

1. General

The Service and Western desire to develop a strong, mutually supportive power planning program to efficiently achieve the missions assigned to each agency.

The parties hereto mutually agree to provide for close coordination and identification of responsibility between agencies in planning for future projects and expansion of existing projects, including consideration of plant sizing studies, water supply and reservoir storage allocations, cost allocations, determination of power values for planning and design studies, marketing plans, power repayment studies, transmission system requirements, and generation planning model studies.

The planning and development of future Service power-producing or power-consuming facilities, as well as planning for increasing capacities of existing Service power facilities, will remain the responsibility of the Service.

The marketing of Federal power and the planning and development of future Federal transmission facilities will remain the responsibility of Western.

Carrying out the above responsibilities will require close and timely coordination between the two agencies, including water supply studies (resource availability), load studies (power needs), engineering studies, economic analyses, financial analyses, and environmental and social assessments.

2. Responsibilities of Water and Power Resources Service

The Service has statutory responsibilities for comprehensive planning, development, and management of multi-purpose water and related land resources projects for multiple objectives. In carrying out these responsibilities, Service will determine the extent to which its regional renewable energy resources can be developed by conducting appraisal and feasibility studies of its potential power-producing or power-consuming developments.

Service has the responsibility for appraisal grade resource studies, with the latitude of evaluating project alternatives using basic power marketing and transmission data provided by Western. Service has the responsibility for feasibility grade resource studies, with Western's active participation through membership on the planning team.

Public meetings (including those with affected power customers) held in connection with feasibility grade resource studies will be conducted by the Service with active participation by Western. Public comments will be directed to the Service, who will furnish pertinent comments to Western for response. Service will coordinate all responses back to the public.

3. Responsibilities of Western Area Power Administration

Western has statutory responsibilities for marketing of Federal power and planning, development, and management of the associated transmission facilities. In carrying out these responsibilities, Western will determine marketability of power from proposed resource developments. Western will also identify interconnected transmission system requirements as well as transmission requirements for Service projects under appraisal or feasibility level investigation. Western serves as the principal point of contact with non-federal power utilities regarding power marketing and planning matters.

Western has the responsibility for appraisal grade transmission and marketing studies, with the latitude of evaluating related alternatives using basic power resource data provided by the Service. Western has responsibility for feasibility grade transmission and marketing studies, and Service may be included on the planning team if desired by either agency.

Public meetings held in connection with power marketing or transmission plans will be conducted by Western. Public comments will be directed to Western, who will furnish pertinent comments to Service for response. Western will coordinate all responses back to the public.

4. General Coordination

Virtually all activities of Western and Service related to Service power resources, loads, and associated Western transmission facilities need to be closely coordinated between the two agencies. To facilitate frequent exchange of information on the activities of each agency, a coordinating committee of representatives of both agencies will be established in each Region/Area and Headquarters Office to meet regularly to discuss items of mutual interest and coordinate activities. The committees can agree to possible deviations from the assignment of specific responsibilities described in section 5 below.

5. Study Items

The following is a description and general assignment of specific responsibilities for study items involved in the planning process at the feasibility level:

- a. Water Supply Studies. Studies of multipurpose water resource development require water supply analyses; which include river regulation, depletions, reservoir sizing (including annual and longer term operating plans), allocation of storage capacities, and determination of maximum and minimum water levels for power and other functions. These studies will be performed by Service with active participation of Western and other concerned agencies. Also included under this item are hydrological diversity studies concerned with possible interbasin power transfers, which would be performed by Western, with participation by Service if desired by either agency.

b. Load Studies. Estimates of future loads and power requirements are required to determine the need for additional capacity and energy, as well as to determine when the power resources will be required. These power marketing surveys, including analyses of alternative and/or complementary power resources, will be performed by Western with participation by Service. Service will advise Western of its need for such studies and provide input data from water marketing surveys.

c. Engineering Studies. As an integral part of the plan formulation process, studies are required to determine potential project power generation capability and potential project power requirements. Such studies involve siting and sizing of facilities, number of generating or pumping units, design parameters, their operating characteristics, and associated costs. Potential generation sources include modifications to existing hydroelectric plants; new hydroelectric plants; pumped-storage plants; and wind, solar, and geothermal electric generation plants. Potential project power requirements could be for facilities such as pumping plants and desalting plants. These engineering studies will be performed by Service with participation by Western.

In the plan formulation process, it is also necessary to analyze the required transmission facilities or arrangements to provide power to project facilities and market power surplus to project requirements. Existing and new transmission facilities are considered, as well as the effect of any new facilities on the existing system. Where capacity of a non-Federal system may be used, an estimated wheeling rate is also required. All of these studies will be performed by Western, with participation by Service. Western will provide to Service the designs and cost estimates for all transmission facilities and, when required, estimated costs for wheeling power over non-Federal transmission lines.

d. Economic Analyses. Power planning programs require a variety of economic studies as they progress through plan formulation to the plan selection and evaluation stages. These studies will be performed by Service with participation of Western. Economic studies involve use of "power values" for computing benefit/cost ratios and design optimization. Methods of determining power values include marketability, developing costs of thermal generating alternatives and use of generation planning models. The Service has responsibility for developing power values with Western providing input as required. Service and Western shall jointly develop generation planning models. Generally, Service will provide data and expertise pertaining to the potential resource technical aspects, and generally, Western will provide data and expertise pertaining to the area loads and resources. Recognizing the strong economic data base and modeling capability of FERC, they may also be requested to provide power values. Power values will then be mutually reviewed and agreed upon by Western and Service.

e. Financial Analyses. Power planning programs associated with multipurpose water resource projects require a variety of financial studies to determine marketability, cost allocation, and repayment capability. These studies involve determination of the type and amount of commodity available; i.e., firm capacity, peaking capacity, firm

energy, and surplus energy. They also determine the practicability of integration of new resources with existing resources and the effects on financial feasibility and total resource availability. In addition, the studies determine if the water and/or power rates required to ensure repayment obligations, including obligation to basin funds, are competitive from a marketing standpoint.

For financial analyses as part of the planning process, final determination of study input items such as dependable capacity, average year energy, and availability of non-firm energy are subject to mutual agreement of Service and Western. Power marketing plans will be developed by Western with participation by Service; project cost allocation studies will be performed by Service with participation by Western.

The determination of reimbursable and non-reimbursable costs for all purposes and the analysis of overall costs to be recovered by revenues in accordance with current policy will be performed by Service. Power repayment analysis to determine the marketability of and rates for any additional power generation source will be performed by Western with participation by Service.

f. Environmental and Social Assessments. Assessments of impacts as to environmental and social implications of a potential Federal or non-Federal power development are required during the planning process as a measure of the acceptability of a proposed project development. Inasmuch as these studies involve determinations of environmental and social conditions over the entire area of influence of a proposed project with and without proposed developments, they will be performed by Service, with Western participating as a cooperating agency commensurate with CEQ regulations. Each agency will be responsible for compliance with NEPA in regard to its individual development responsibilities whenever a common environmental statement is not practical. For studies of transmission needs not directly associated with Service projects, Western will perform such studies.

DESIGN AND CONSTRUCTION

1. General

The Service and Western have reached accord on certain policies and procedures, as set forth below, for ensuring efficient, effective, and nonoverlapping performance of their respective design and construction responsibilities. Deviations at particular installations for safety, efficiency, or mutual convenience shall be agreed to and documented by each agency.

2. Policies

a. The Service has the responsibility for design of and constructing the authorized resource development facilities. These facilities normally include all equipment and structures located at the facility site up to the high-voltage connections at Service-operated powerplants, pumped-storage plants, and pumping plants. This includes circuit breakers providing control and protection functions to individual operating units, power transformers with their associated arresters and high-voltage switches, located on the plant or as an integral part of the plant installation. High voltage cables which are installed in or immediately adjacent to the powerplant and/or dam shall also normally be considered as Service facilities. (See attachment 1.)

b. Western has the responsibility to design and construct associated power transmission and marketing facilities. These facilities normally include all electrical equipment and structures located on the power system side of the power transformers (or associated high-voltage disconnects, if any) at powerplants and pumped-storage plants. (See attachment 1.) At power-consuming stations and pumping plants where the high-voltage facilities are physically separated at the site from the plant, these facilities normally include all electrical equipment and structures down through the low-voltage side of the power supplying substation with step-down transformers. (See attachment 2.)

c. To the extent practicable, new facilities should be designed and constructed so that principal facilities of each party are physically separated. By agreement, appurtenant devices or electrical equipment of either party may be located in, between, on, or adjacent to the equipment or structures of the other party if mutually determined appropriate for cost effectiveness, convenience and/or efficiency of the total installation.

d. Design and construction of modifications to facilities with joint ownership shall be subject to review and inspection by the other party. Where practicable, modifications shall include consideration of separation of facilities by ownership.

e. Facilities in process of design or construction at the time of this agreement with substantial work accomplished shall be completed to the most logical stage prior to transfer (i.e., design underway shall be

completed before transfer for construction; construction underway shall be completed before transfer). An exception to this is responsibility for CAP transmission facilities which is covered by a separate Region/Area agreement.

f. Overlapping and duplicate drawings of facilities shall be avoided to the extent practicable. Drawing ownership, approval responsibility, updating and distribution following revision shall remain with the party having the majority interest in the facility, as mutually agreed.

3. Procedures

a. Upon identification of a need for connections between a Service facility and the area power system, contact shall be made between the respective Area and Region staffs to establish the requirements of each agency. This shall be based on the aforementioned policies. When basic agreement is reached, it shall be documented by an exchange of letters which establishes general details and schedules. It should be recognized that adequate time must be allowed for each agency to incorporate new work into its programs and budgets (at least 24 months normally required for major work).

b. Additional interchange of information and correspondence should be subsequently made, including coordination teams, as appropriate, to ensure a coordinated final design and installation.

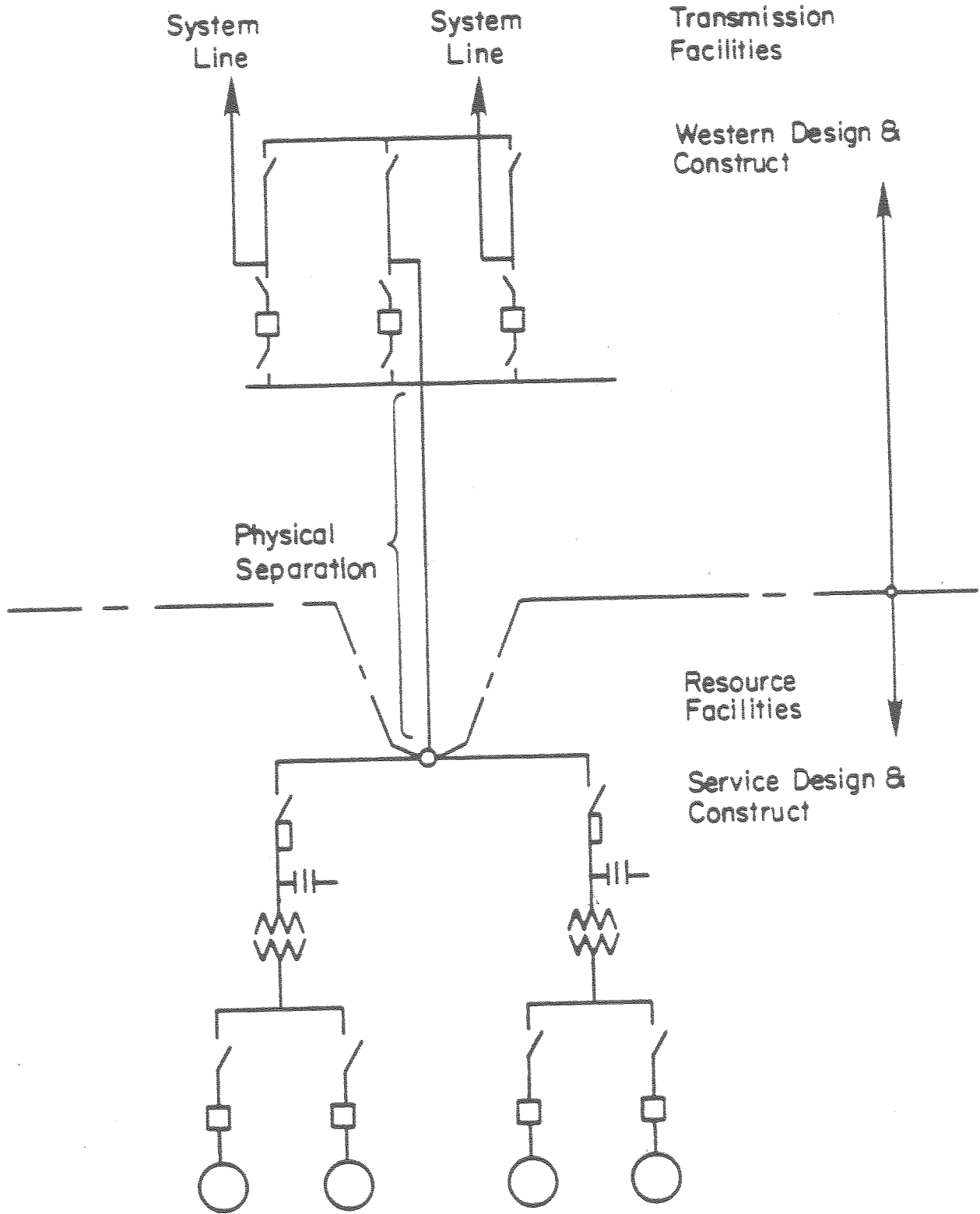
c. If differences of opinion develop during the coordination process, the problem shall be promptly referred to and escalated through corresponding management levels until resolution is achieved.

d. Engineering drawings of joint facilities shall be in the custody of the party with the majority interest in the facility, and the other party shall be provided with reproducible copies of those drawings. Revisions, corrections, and changes shall be made by the drawing custodian. Copies of the drawings shall be appropriately distributed. Service shall add a Western drawing identification to those pertinent existing and new Service drawings for Western filing and retrieval. Western shall retain the Service drawing identification on those drawings of existing joint facilities that pass to Western custody, and add a Western drawing identification. For new Western drawings, Western shall add a Service drawing number when provided.

e. Overlapping engineering drawings of joint facilities shall be identified as described above. However, revisions, corrections, and changes shall not be made by the drawing custodian without review of the other party.

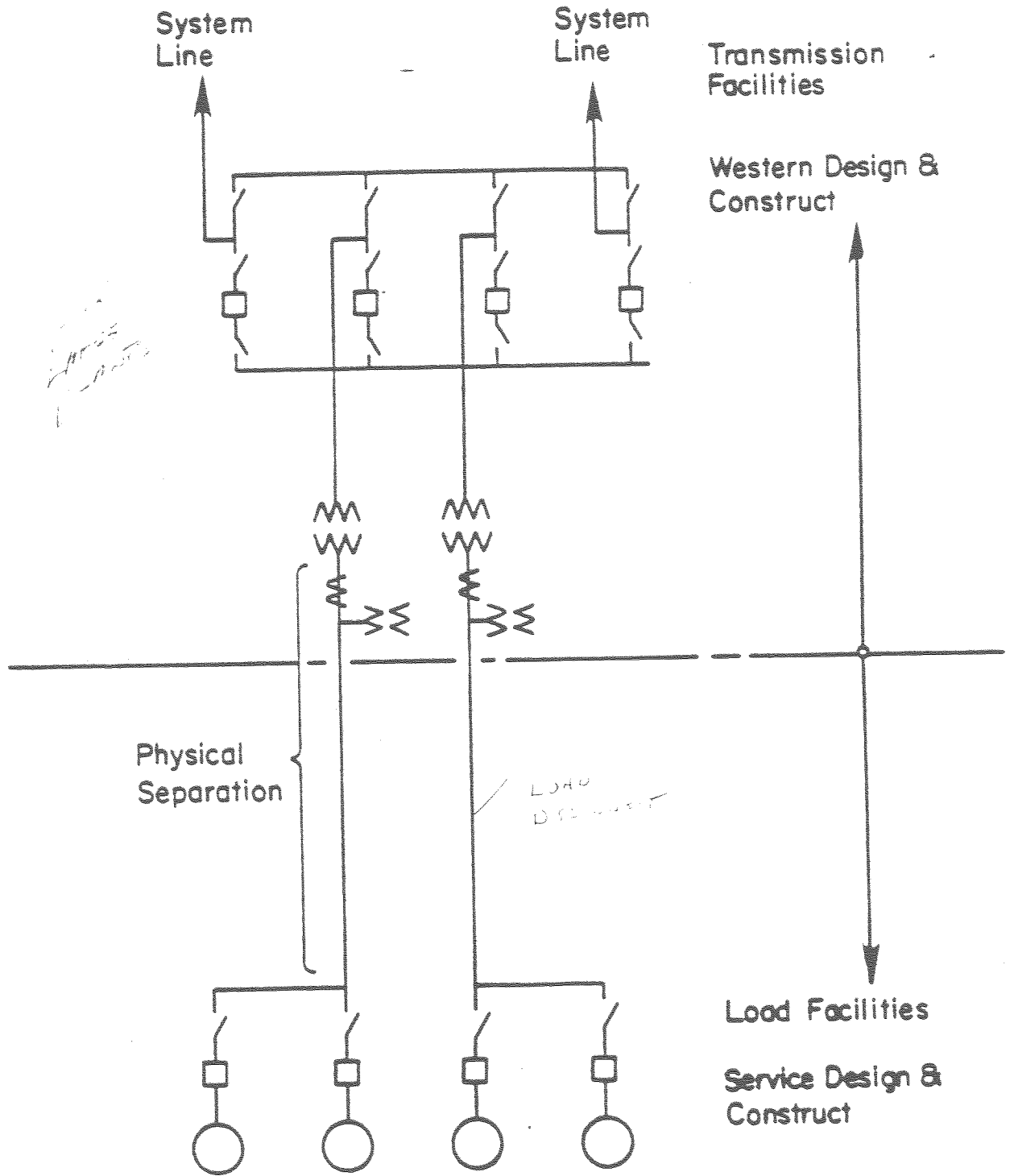
ATTACHMENT 1

Design and Construction Responsibility of Facilities on a Common Site— Resource Facilities



ATTACHMENT 2

Design and Construction Responsibility of Facilities on a Common Site – Load Facilities



BUDGETING AND PROGRAM CONTROL

1. Operation and Maintenance of Joint Use Facilities

The Service and Western will program and budget funds for their specific responsibilities. The agencies will mutually agree in writing on a work plan on the O&M of joint use facilities, which includes the fiscal year work and services to be performed and associated funding requirements for each agency by February 1 of the current budget year. The budgeting agency will take the lead in initiating the preparation of the work plan. The estimates will cover a 6-year period, the oncoming budget year (covered by the President's Budget), the new budget year, plus four out years.

By August 15 of the current budget year, each agency will advise the other of any change in the estimate resulting from departmental funding level passback on the new budget year. Further, any changes in budget allowances by the Office of Management and Budget affecting the work plans will be relayed to the other agency within 1 week of receipt of such data.

2. Operation and Maintenance of Facilities Transferred to Western

The Service will continue to provide funding on the newly (February 1980) transferred facilities at the level projected in the 1981 Congressional Budget for fiscal year 1980 and 1981. For fiscal year 1982 and thereafter, each agency will be fully responsible for budgeting all staff expenses and cost associated for its own facilities. This is intended to cover only facilities other than those considered transferred by both agencies on October 1, 1977.

3. Replacement and Addition Items and Construction of New Facilities

Replacement and addition items and construction of new facilities that are not yet in place, but when in place will be a part of the facilities agreed upon for transfer and for which funds are included in either agency's budget for fiscal year 1980 and 1981 should be effectively transferred at an appropriate time so as not to interrupt the orderly flow of normal work activities (i.e., design underway shall be completed before transfer for procurement/construction; procurement/construction underway shall be completed before transfer). The agency that budgeted for the work shall continue to provide funding during fiscal year 1980 and 1981. For fiscal year 1982 and thereafter, each agency shall be fully responsible for budgeting for the work for which it is responsible. When new transmission construction items are identified, they shall be documented by an exchange of letters which establishes general details and schedules. It should be recognized that adequate time must be allowed for each agency to incorporate new work into programs and budgets (at least 24 months normally required for major work). An exception to this is the responsibility for budgeting for CAP transmission facilities which is covered by a separate Region/Area agreement.

4. Program Changes

Modification to work plans and service agreements may be made by mutual consent of both parties subject to the regulations in effect for each agency. ←

5. Financing

The agency for which work is being performed (the Service or Western) will advance funds to or reimburse the agency performing the work quarterly (or at other periods if mutually agreed). Work will be financed with advanced funds or from other funds on a reimbursement basis as elected by the agency performing the work. Costs chargeable to the financing agency will include all direct and indirect costs reasonably attributable to the work performed. The agency performing the work will classify costs in any reasonable detail requested by the financing agency which is compatible with the performing agency's accounting system.

6. Exchange of Budget and Other Financial Data

The Service and Western will make available to each other all the financial, budget, and statistical information necessary for each agency to meet its responsibilities pursuant to law. The timely interchange of certain financial data and information will be necessary to ensure optimum coordination in the areas of planning, construction scheduling, budget formulation and other operational purposes. Accordingly, such interchange will be made promptly as pertinent data and information become available. Pertinent budget details and funding requirements will be established by work and task agreements consummated pursuant to above paragraphs.

Specific information interchanged shall include:

- approved Congressional Budget documents and program control schedules,
- schedule for estimates covering the 6-year period (oncoming budget year, the new budget year plus four out years) for the annual fiscal year work plans and/or the work service agreements to be performed. Due dates established in section 1 above shall be applicable, and
- financial reports and statistical information as appropriate.

ELECTRIC POWER RESOURCE AND TRANSMISSION RESEARCH,
DEVELOPMENT, LABORATORY AND TESTING ACTIVITIES

1. General

The Service and Western have reached accord and agreement on certain policies and procedures, as set forth below, for ensuring effective performance of their respective electric power research, development, laboratory and facilities testing activities.

2. Policies

a. Service and Western shall jointly fund and staff an electric power resource and transmission research, development, and testing program. Western shall have administrative control of the system and transmission program. Service shall have administrative control of the balance of the program. This joint program shall be coordinated by a joint committee consisting of four persons, with each party appointing two persons to the coordinating committee. Research and development programs outside the joint program shall not be coordinated by the committee.

b. Specialized, nonroutine materials laboratory work performed by the Service for Western shall be scheduled and performed with the same priority as other Service project work:

(1) Western shall reimburse Service for work performed on a cost basis and funds shall be transferred by SF-1081.

(2) Western shall provide annually, in advance, an estimate of the amount of work anticipated.

PROJECT USE POWER

With respect to electric service for project requirements, the Service will continue to administer and provide power under those electric service arrangements now in effect. Western shall be consulted during the development of future water contracts which involve electric service and shall concur with such contracts before they are executed. Modifications or revisions of existing contracts which involve changes in electric services shall be subject to review and concurrence by Western before execution. Rates for such services shall be established by Service. Cost data for transmission service shall be provided by Western. To the extent the Service's power rates are subject to revision, such rates from any project shall be revised by the Service at the same time that Western effects an adjustment in rates to its customers for power from the project.

The Service shall keep Western advised of any future projected project requirements which will require withdrawal of power under contract to preference customers. To the extent that adequate notice is provided, Western shall provide for such withdrawal in its marketing plans. In the event project requirements develop for which withdrawal has not been provided, Western shall use its best efforts to secure for the Service, at cost to the Service, the required power supply in the most economic fashion until such time as withdrawal can be effected. In order that Western may properly reflect project requirements in its operations, the Service shall also provide Western with operational data and forecasts.

Western will provide all transmission service and associated facilities. To the extent that power for project use requirements is not reserved by Service from future multipurpose Service projects, it is the intent that Western will provide the power supply and administer all electric service arrangements.

POWER SYSTEM OPERATIONS

1. General

The Service and Western will strive to maintain high standards associated with system operations and reliability and comply with the criteria and procedures of the applicable pooling agreements and national electric reliability councils. To this end, the following general operating policies shall apply.

2. Policies

- a. Western is responsible for all power system dispatching functions.
 - b. The Service and Western shall each have operational control of its facilities, except as otherwise agreed. However, the Service and Western will mutually determine the safest and most reasonable point of demarcation of operating jurisdiction over switching and clearances on an Area/Region basis.
 - c. Annual operating plans and water release schedules are the responsibility of the Service. But, inasmuch as these plans impact Western's resources for meeting firm loads and reserve requirements, the Service will afford Western an opportunity to assess and comment on proposed plans and/or changes thereto. The Service will keep Western routinely informed of the current water operating plan and associated water release and operational parameters. Western will keep the Service informed of power system constraints and marketing plans that affect water operating plans.
 - d. Western is responsible for power and energy purchases. Western will consult with the Service in estimating the amount and probability of hydro energy that may be produced by water releases. This data will be used in estimating energy purchase requirements for firm power obligations.
 - e. All power systems are obligated to supply generation capacity to meet their loads moment by moment as required by industry standards. System load control function is achieved by load-frequency control equipment measuring the net flow in and out of the system at the control boundaries and then automatically adjusting generation levels within the control area to keep the net boundary power flow as close to the net scheduled quantity as possible while also attempting to maintain 60 Hz and correct time. This function is called automatic generation control (AGC).
- Western is responsible for the AGC function for the Federal power system within water and equipment constraints. The Service shall make available to Western generating capacity to meet the AGC obligation. The Service is responsible for selecting units for control, and setting the limits of operation of the units. The Service and Western will cooperate in developing equipment configurations for the satisfaction of these basic responsibilities.

f. The Service will develop with Western, annual schedules for maintenance of generators and associated facilities that affect generation. Water release requirements, maintenance requirements, and power system generation requirements (including maintenance schedules for customer generator) will be fully considered in developing the final maintenance schedules. Western will coordinate any outage schedules where required with other area utilities. Every effort will be made to arrive at mutually acceptable maintenance schedules. Such schedules will be subject to change by mutual agreement to meet changing system requirements. The Service will coordinate with Western on all changes and delays to the maintenance schedules and notify Western promptly of emergency maintenance.

g. The Service will cooperate with Western to maintain adequate operating reserves by maximizing generating unit availability (minimum down time) within the constraints of safe and reliable unit operation, available manpower and required maintenance. Moreover, the Service will inform Western as soon as possible about forced outages in order that alternate sources of reserves may be arranged.

h. Where practical, the Service and Western will cooperate to optimize the operation of project loads by maximizing the use of off-peak periods for pumping and other means that contribute to reduced cost for satisfying project loads.

i. The Service and Western will cooperate in optimizing reserve generating capacity for system operation. In this regard, the Service will cooperate in qualifying project pumping loads, when feasible and appropriate, for interruptible load for use as spinning reserve capacity in accordance with reserve pooling requirements.

j. The Service and Western will coordinate with regard to generator loading criteria. Generally, the Service will define loading constraints in accordance with machine designs. However, the Service will endeavor to provide the maximum flexibility in those loading schedules, particularly in times of power system emergencies when operation outside normal constraints may be required to maintain system integrity or to restore electrical service.

k. The Service and Western will cooperate in controlling system voltage. The Service will regulate machine voltages within machine and plant equipment voltage constraints so as to provide those bus voltages and/or var flows requested by Western in executing its responsibility for maintaining power system reliability and integrity.

l. Load shedding is commonly practiced by members of the national reliability councils to provide relief to system facilities, to improve operating conditions both during and following major disturbances, and to minimize the amount of and time that customer load might otherwise be interrupted. Western will be responsible for coordinating load shedding programs with area pools and the reliability councils. The Service will cooperate with Western in developing load shedding programs which involve project facilities.

m. Power system stability problems often may most effectively be solved by the addition of supplemental controls for generators. The Service and Western will cooperatively determine the need for and will cooperatively implement these measures.

n. The Service and Western have extensive needs for communication related to the control and monitoring of interconnected equipment. This includes the need for continuous exchange of data by electronic analog and digital means. Satisfaction of these needs in the most efficient and least costly manner requires that the Service and Western work cooperatively to explore means of sharing communications, control equipment and facilities.

o. The Service and Western will cooperatively develop policies for communication between powerplant operators and/or control centers and dispatchers that will simplify and expedite communications wherever practical.

p. Changes in power systems often dictate the need for changes in equipment ratings and characteristics. The requirement for increased circuit breaker interrupter rating due to system growth is an example of this. The Service and Western shall cooperatively determine the need for these changes and program for replacement equipment to satisfy these needs.

q. The Service will make generating units available for condensing operation, when units are equipped for this service, as requested by Western for the purpose of voltage support or to provide additional rotating inertia to the system. When condensing units, the water will be depressed from the turbine, where possible, to minimize water and energy loss. If condensing units are needed for creditable spinning reserves as determined by Western, the Service when practical will provide controls necessary to make condensing units responsive to system frequency decay.

r. Western will prudently define permissible closing phase angles throughout its power system with due consideration given to the proximity of rotating machines, system impedances, and the urgency of closure of the system segment. Western will permit the Service to review and comment on the proposed closing angles and will make every effort to arrive at mutually acceptable angles.

s. While application of generator dropping should not be used as a substitute for designing an adequate and reliable transmission system, power system conditions may warrant the use of this option. The Service will cooperate with Western in implementing generator dropping schemes as mutually agreed to enhance power system stability or the power transfer capabilities of transmission system elements.

t. Western is responsible for performing transmission system computer model studies including power and reactive flows, system stability, and fault currents. Western will provide the results of these studies to the Service upon request or perform special transmission system studies when requested.

u. Western shall have engineering control for specifying protective relay settings associated with the transmission grid. The Service shall have engineering control for specifying protective relay settings for plants and other Service controlled equipment. The Service and Western shall coordinate protective relay application, specifying relay settings and maintenance standards to assure optimum power system reliability and protection of power system equipment.

v. There are a number of requirements, such as system operations and reserve pools, for established uniform standards and testing procedures for determining the generating capacity ratings. Western will provide input to the Service in establishing the standards and testing procedures. The Service will perform the tests and establish the generator ratings to be used in determining the generating capacity. Capacity values will be determined by the Service with consultation from Western.

w. The Service and Western will cooperate to maintain coordinated and consistent switching, clearance, and safety procedures.

x. Each Region/Area shall continue to jointly develop and mutually agree on detailed operating procedures covering all operational aspects between the two organizations. These agreements will include system operations, relay coordination, access to facilities, sharing of tools and equipment, communications equipment, cost assignment and sharing, and other operating details.

y. Western shall have the principal responsibility for administration and operation of the Electric Power Training Center to provide for the power operator training needs of Western and the Service. Service shall have the responsibility for developing the basic requirements for curriculum and classes for Service powerplant operator training and certification. Service will also provide some special lectures and material for this and other training. Western shall have the responsibility for developing curricula and classes for the balance of the training.

This joint program shall be coordinated by cooperative actions of each agency. Training performed by Western for the Service shall be scheduled and accomplished with the same priority as other Western training.

(1) Service shall reimburse Western for work performed on a cost basis, and funds shall be transferred by SF-1081.

(2) Service shall provide annually, in advance, an estimate of the amount of work anticipated.

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z. Ownership of metering equipment used to measure the electric power and energy to be made available to either agency hereunder will be as mutually agreed by the responsible Region/Area. Metering equipment shall be maintained and tested in accordance with good utility practice. Should any meter fail to register, the electric power and energy delivered during such period of failure shall be estimated from the best information available.

REPAYMENT STUDIES

The procedures for preparation of annual repayment studies will be consistent with the principles outlined in the attached April 17, 1979, letter from the Commissioner, Bureau of Reclamation, to the Administrator, Western Area Power Administration; and the Administrator's reply dated May 25, 1979, Provided, that it is recognized that the opening statement in the May 25, 1979, letter regarding studies in which the investment bearing the lowest rate of interest would be paid first relates to specific special studies which were made and is not a criteria for annual repayment studies.



United States Department of the Interior

BUREAU OF RECLAMATION
WASHINGTON, D.C. 20240

IN REPLY
REFER TO: D-450
631.

APR 17 1979

Mr. Robert L. McPhail
Administrator
Western Area Power Administration
Department of Energy
P.O. Box 3402
Golden, CO 80401

Dear Mr. McPhail:

This will acknowledge the letter dated March 27, 1979, to Mr. Prichard of my staff from Mr. Harman of your staff requesting our assistance in making power repayment study program modifications and in performing the studies. We will be pleased to provide these services; our Division of O&M Technical Services in Denver will work with your staff, as you suggest, to coordinate the tests and analyze results of the completed studies. We recognize the need for close coordination and cooperation between our agencies in the performance of power repayment, in determination of criteria, and in the rate adjustment process. We therefore believe it is important that we participate in discussions of the Power Rates Council. With your concurrence we would like to send a representative to the April 18 meeting in Washington, DC.

With regard to the subject of power repayment studies, we have been reviewing the suggestions contained in your letter dated April 7, 1978, on the subject "Repayment Responsibility for Reclamation Projects" and in your February 18, 1979, letter where you briefly refer to input on power repayment studies from Reclamation. We are replying separately to your February 18, 1979, letter as it deals with many other subjects. Our memorandum to you dated April 10, 1978, informed you that it was premature to proceed as suggested in your April 7 letter; however, we are now prepared to proceed with your suggestion in the April 7 letter that Reclamation/WAPA power repayment study team be established in each region/area office to coordinate preparation of a single-repayment study for each project in which our two agencies have a mutual interest. We agree with your belief that taking this approach and running studies essentially as they have been in the past will resolve many questions and apparent problems. Upon receipt of your concurrence, we will inform our regional offices to proceed with the repayment studies in coordination with

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the appropriate area office. The uncompleted studies for fiscal year 1977 and 1978 can be run using the power repayment study computer program maintained at the Engineering and Research Center without modification.

Sincerely yours,

Orrin L. Lewis

Printed Name:

R. Keith Higginson
Commissioner

MAY 25 1979

IN REPLY
REFER TO: A6000

Mr. Keith Higginson
Commissioner
Bureau of Reclamation
18th and C Street, NW.
Washington, DC 20240

Dear Mr. ^{Keith}Higginson:

Thank you for the April 17 letter in which you agreed that the Division of O&M Technical Services in Denver would help prepare power repayment studies in which the investment bearing the lowest rate of interest would be repaid first. The Division's assistance was most valuable in preparing the material presented to the Power Rate Council on April 18. We are pleased that Messrs. Bucy and Wallace from your office could be present at the meeting to participate in the discussion and observe the Power Rate Council's review of alternatives to the present method of preparing power repayment studies.

Events of the past months have demonstrated that the concept of region/area office coordination is the most efficient way to prepare a power repayment study which is acceptable to and defensible by each organization. In most offices, informal Bureau of Reclamation/Western Area Power Administration teams already exist. The day-to-day cooperation exhibited between local offices thus far should be sanctioned and encouraged.

Formation of the Department of Energy for the first time permits the five power marketing agencies to seriously consider consistent new ways to repay the investment in many Federal power projects. The power repayment study is a fundamental part of any repayment plan. For the foreseeable future, Western Area Power Administration plans to continue to use the power repayment study computer program maintained at the Engineering and

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Research Center to prepare the studies. We contemplate that data processing equipment in the area and district offices will continue to have access to the Cyber to perform both routine and special power repayment studies as required.

Sincerely,

Bob

Robert L. McPhail
Administrator

bcc: Area Managers, Billings, MT; Boulder City, NV; Denver, CO;
Sacramento, CA; Salt Lake City, UT (with copy of Bureau of
Reclamation's April 17, 1979, letter to Western Area Power
Administration)