Statement of Commissioner Gilbert G. Stamm, witness for the Department of the Interior, before the Subcommittee on Water and Power Resources, House Committee on Interior and Insular Affairs, on H.R. 13816 to amend Public Law 87-590 (76 Stat. 389) in order to increase the amount authorized for the construction of the Fryingpan-Arkansas Project, Colorado, and to authorize construction of the second 100-megawatt unit at the Mt. Elbert Pumped Storage Powerplant site of the project. (June 25, 1974)

Mr. Chairman and members of the Subcommittee, we are here today and offer the Department's views on H.R. 13816, a measure to amend Public Law 87-590 for the purpose of increasing the amount authorized for construction of the Fryingpan-Arkansas Project which is located in south-central Colorado and to authorize construction of a second 100-megawatt unit at the Mt. Elbert Pumped Storage Powerplant site.

The Department's position recommending enactment of H.R. 13816 with amendments is presented in a letter to the Chairman of the Committee.

Public Law 87-590 requires that all reimbursable costs be repaid within a period of 50 years following completion of project construction. It also established an appropriation ceiling of $170 million, adjusted for fluctuations in construction costs as indicated by engineering cost indexes, plus such additional sums as may be required to investigate, plan, construct, operate, and maintain public facilities for recreation, fish and wildlife, and scenery conservation incurred under section 4 of the act.

Section 7 of Public Law 87-590 authorized an amount of $170 million for construction of the Fryingpan-Arkansas Project based on June 1961 prices.
Application of the cost index factor for January 1973 price levels raises the total authorized appropriations to $314 million.

The installation of the second 100-megawatt unit and construction of the expanded municipal and industrial water delivery system would require an increase in the authorized ceiling of $81 million to $395 million. The Department supports an increase of $25.5 million to cover the added power features, but desires to defer support of the $55.5 million pending restudy and recertification of the finding required by section 1(c) of Public Law 87-590. Assuming the municipal and industrial conveyance system were to be built, the total project cost estimate of $461 million is comprised of the $395 million, which is subject to ceiling restrictions, plus $66 million of section 4 and highway improvement costs. Without the municipal and industrial system, the total estimated cost is $405 million.

In March 1967, the Bureau of Reclamation reported to this Committee by letter on its postauthorization planning for the project's power system. The plan described in that letter provided for the construction of two powerplants: (1) Mt. Elbert Pumped Storage Powerplant with 100 megawatts of initial installed capacity and provisions for the later installation of a second 100-megawatt pump-back generating unit, and (2) Otero Powerplant with 11 megawatts of installed capacity.

It was also noted in the report that the costs of the second 100-megawatt unit at Mt. Elbert Pumped Storage Powerplant when added to the other estimated project costs would exceed the appropriation ceiling. At
that time, we indicated that the initial 100-megawatt unit would be installed and the second 100-megawatt unit would be deferred until a market for the power developed. We further indicated that congressional authorization to cover the costs of the second unit would be sought when that market developed.

This testimony updates and explains changes that have occurred since March of 1967 in support of the request for an increase in the appropriation ceiling for the project.

The power market has expanded because of a broader based need for peaking power and the development of power pooling and transmission facilities that permit service to a larger geographical area. A study considering these circumstances indicates that 950 megawatts of peaking capacity for Colorado will be required by 1980. Currently, powerplants used strictly for meeting peak demands in Colorado have a total installed capacity of 444 megawatts. The Fryingpan-Arkansas Project additions of two 100-megawatt units are the only major peaking power installations currently planned in Colorado. Even with the total project peaking capacity in operation by 1980, there would still remain about 295 megawatts of peaking requirement that would need to be supplied from less efficient sources.

Five preference customers and two private utilities have expressed an interest in purchasing the project peaking power. Therefore, it is evident that a market for the second unit exists and will be utilized at the earliest date that construction can be accomplished.
Construction of Mt. Elbert Pumped Storage Powerplant, Mt. Elbert Forebay, and Twin Lakes Dam enlargement will include $7.3 million in costs specifically to accommodate the second 100-megawatt unit installation. Of the $7.3 million, about $4.6 million is included in the present contract for the Mt. Elbert Pumped Storage Powerplant and will represent a "sunk cost" irrespective of whether or not the second unit is installed.

Installation of the second unit and appurtenant facilities would require an additional $25.5 million, all of which exceeds the existing authorized ceiling. The additional incremental costs associated with installation of the second unit, exclusive of transmission costs, would amount to about $195 per kilowatt of installed capacity. That amount is considerably lower than comparable costs of about $350 per kilowatt of installed capacity for coal-fired steam electric plants which have been recently constructed in the area.

It was originally estimated that about 59,000 acre-feet of the project water supply would be devoted to supplemental irrigation and about 20,500 acre-feet to municipal and industrial water supply. It is now estimated that ultimately only about 22,200 acre-feet will be used for supplemental irrigation and about 57,300 acre-feet for municipal and industrial water supply. Of this amount, the Fountain Valley would receive about 36,000 acre-feet, the Arkansas Valley about 18,300 acre-feet, and the city of Pueblo about 3,000 acre-feet. The initial use of municipal and industrial water would be about 30,000 acre-feet, which would build up to the ultimate use by the year 2020. Water not used for municipal and industrial
purposes is available and marketable for supplemental irrigation.

Return flows from the increased municipal and industrial water supply would be available for reuse for either municipal and industrial purposes or irrigation. It has been assumed that the return flows would be primarily used for irrigation.

The Fountain Valley Conduit was originally designed to deliver project water to Colorado Springs only. The population in the area that could be served by the conduit nearly doubled between 1960 and 1970. The communities of Security and Widefield, which were not reported in the 1960 census of population, had a combined population of more than 15,000 in 1970. As a result of that dramatic growth, a survey of the communities that could be served by the Fountain Valley Conduit was made. The result indicates that the communities of Fountain, Security, Stratmoor Hills, and Widefield need project water in addition to a greatly increased demand by Colorado Springs.

The Arkansas Valley Conduit was originally designed to deliver a supplemental water supply through a main line to communities between Pueblo and Lamar. Recent Colorado legislation and court decisions have made ground water supplies affecting surface water supplies subject to water-right appropriation. Water rights of many of the communities which depend on ground water supplies are now considered to be junior to water rights of surface appropriators. Thus, these communities must look to other sources if they are to maintain dependable water supplies. As a result, it is now anticipated
that many such communities will require a much larger proportion
of their water supply from the project and that several communities
not previously considered to be served by the project now require
such service.

The estimated cost of the expanded municipal and industrial conduits
is about $90.2 million. Of that amount, about $55.5 million exceeds
the authorized appropriation ceiling under the provisions of
section 7 of the authorizing act.

Section 1(c) of Public Law 87-590, which authorized the Fryingpan-
Arkansas Project, provides that:

"No part of the single purpose municipal and industrial
water supply works involved in the Fryingpan-Arkansas
project shall be constructed by the Secretary in the
absence of evidence satisfactory to him that it would
be infeasible for the communities involved to construct
the works themselves, singly or jointly."

The Secretary of the Interior approved and adopted a report on
December 5, 1969, which demonstrated that the various entities to be
served by municipal and industrial delivery systems did not have the
financial capability, either singly or jointly, to construct the
work themselves. Five years have elapsed since that study was
completed; therefore, the Department believes that a new study
should be made to redetermine whether the local municipalities now
have the ability to finance the required water works.
The project remains economically justified with the addition of the benefits and costs for the facilities that would be included in the increased appropriation ceiling. The original benefit/cost ratio was 1.48 to 1.00. Adding power features alone the new benefit/cost ratio would be 1.57 to 1.00. If municipal and industrial features were added at current costs and benefits, the benefit/cost ratio would be 1.49 to 1.00.

On either basis, repayment analyses for the project show that the project costs could be repaid within the required 50-year period with the second 100-megawatt unit installed. Without the second unit, an increase in power rates and/or municipal and industrial water supply rates would be required to achieve project payout.

A final environmental statement for the Mt. Elbert Pumped Storage Powerplant was filed with the Council on Environmental Quality on October 19, 1971. The statement included both installation of the first unit and the second unit addition proposed for authorization in H.R. 13816. A draft statement for the overall project was released on March 18, 1974, and public hearings were held in Aspen and Pueblo, Colorado, during May 1974. The final environmental statement is in preparation and will be filed with the Council on Environmental Quality in January 1975.

In accordance with the Fish and Wildlife Coordination Act, construction of the second unit of the Mt. Elbert Powerplant requires continuation of ongoing studies and development of recommendations.
concerning fish and wildlife resources which might be affected by the powerplant. The construction and operation of the powerplant will be coordinated within the Department to assure reasonable compliance with recommendations.

The facilities that would be installed with the authorized increase in the appropriation ceiling are needed and supported by local interests and by the executive branch amended as outlined herein.
H. R. 13816

IN THE HOUSE OF REPRESENTATIVES

MARCH 28, 1974

Mr. EVANS of Colorado introduced the following bill; which was referred to the Committee on Interior and Insular Affairs

A BILL

To amend the Act authorizing the Fryingpan-Arkansas Federal reclamation project, Colorado, in order to increase the amount authorized for such project (Act of August 16, 1962; 76 Stat. 389) and to authorize construction of a second one hundred-megawatt unit at the Mount Elbert pumped storage powerplant site of such project.

1. Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

2. That section 7 of the Act entitled "An Act to authorize the construction, operation, and maintenance by the Secretary of the Interior of the Fryingpan-Arkansas project, Colorado", approved August 16, 1962 (76 Stat. 389), is amended by striking out "$170,000,000 (June 1961

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prices)" and inserting in lieu thereof "$395,000,000 (January 1973 prices)."

Sec. 2. That for the purpose of increasing the hydro-
electric generating capacity the Secretary of the Interior is
authorized to construct, operate, and maintain a second one
hundred-megawatt unit at the Mount Elbert pumped storage
powerplant site of the Fryingpan-Arkansas project, Colorado.
The funds required to construct such unit are included in the
amount authorized to be appropriated by section 1 of this
Act.
Dear Mr. Chairman:

This responds to your request for the views of this Department on H.R. 13816, a bill "To amend the Act authorizing the Fryingpan-Arkansas Federal reclamation project, Colorado, in order to increase the amount authorized for such project (Act of August 16, 1962; 76 Stat. 389) and to authorize construction of a second one hundred-megawatt unit at the Mount Elbert pumped storage powerplant site of such project."

We recommend that the bill be enacted as set forth herein to limit the increased level of authorized appropriations to $340 million. The bill would increase the authorized appropriations for the Fryingpan-Arkansas Federal reclamation project in Colorado from $170 million (June 1961 prices) to $395 million (January 1973 prices). (In January 1973 prices, this increase would be from about $313.5 million to $395 million). The bill would also authorize the Secretary of the Interior to construct, operate and maintain a second one hundred-megawatt unit at the Mount Elbert pumped storage powerplant site of the Fryingpan-Arkansas project.

The Fryingpan-Arkansas project authorizing legislation established a $170 million appropriation ceiling with adjustments for fluctuations in construction costs. Section 4 of that legislation also authorized appropriation of the additional sums necessary for recreation and fish and wildlife and scenery conservation. Subsequently P.L. 87-874 authorized certain highway improvements in connection with the project.

Attached hereto is a summary statement of project costs based on January 1973 prices. As it indicates, the additional authorized appropriation ceiling required is $80,941,000 of which $25,500,000 is attributable to the installation of the second one-hundred megawatt powerplant unit and $55,441,000 is the additional cost of municipal and industrial delivery facilities which are part of the project. The latter increase is associated with the increased capacities of the delivery systems and modifications to the systems to serve more entities than originally anticipated.

We support increasing the level of authorized appropriations to cover that amount. The bill would, however, also include an additional $55,440,000 appropriation authorization to cover

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we believe it would be appropriate for the Secretary to make a new determination as to feasibility of any further funds are authorized, we therefore recommend that the $55,944,000 for the cost of additional municipal and industrial facilities, not be authorized and that the bill be amended by striking the figure $39,700,000.

With respect to the second one-hundred megawatt Mt. Elbert powerplant unit, the Bureau of Reclamation has undertaken a power marketing study which concludes that a satisfactory market exists for that unit's electricity and that its orderly completion would contribute toward meeting the area's energy requirements.

In accordance with the National Environmental Policy Act of 1969, the Bureau of Reclamation has prepared a draft environmental impact statement on the overall Fryingpan-Arkansas project. This statement was released to the public on March 18, 1974, and public hearings were held in Aspen and Pueblo, Colorado in May 1974. The final statement is expected to be complete by January 1975. In addition, final environmental impact statements have been prepared and filed with the Council on Environmental Quality on three specific project features — the Mount Elbert Pumped-Storage Powerplant (filed October 19, 1971), the Pueblo Dam and Reservoir (filed June 2, 1972) and the Northside Collection System (filed July 19, 1973). The environmental impact statement for the Mount Elbert Pumped-Storage Powerplant covers the plant facilities and installation of both the first unit which is under construction and the second unit which would be authorized by H.R. 13816.

The Office of Management and Budget has advised that there is no objection to the presentation of this report from the standpoint of the Administration's program.

Sincerely yours,

Secretary of the Interior

Honorable James A. Haley
Chairman, Committee on Interior and Insular Affairs
House of Representatives
Washington, D.C. 20515

cc: Sec. r.f. (2)
OMB (4)
U/S
Ofc. of Comm
BSF&W, BOR, NPS, SWP, BLM, LBR,
ASOL/C&W, E&R, IA
A/E CL&PA, E&M, L&WR
Leg. Counsel, Mr. Ward,

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Statement of Commissioner Gilbert G. Stamm, Bureau of Reclamation, Department of Interior before the Subcommittee on Water and Power Resources, House Committee on Interior and Insular Affairs on H.R. 13816 to amend Public Law 87-590 (76 Stat. 389) in order to increase the amount authorized for the construction of the Fryingpan-Arkansas Project, Colorado, and to authorize construction of a second 100-megawatt unit at the Mt. Elbert Pumped Storage Powerplant site of the project.

Mr. Chairman and members of the Subcommittee, we are pleased to appear today and offer our views on H.R. 13816, a measure to amend Public Law 87-590 for the purpose of increasing the amount authorized for construction of the Fryingpan-Arkansas Project which is located in South Central Colorado and to authorize construction of a second 100-megawatt unit at the Mt. Elbert Pumped-Storage Powerplant site.

The Department's letter to the Chairman of the Committee presents its views in which the Office of Management and Budget concurs and recommends enactment of H.R. 13816. My testimony will be consistent with that document.

Public Law 87-590 requires that all reimbursable costs are to be repaid within a period of 50 years following completion of project construction. It also established an appropriation ceiling of $170 million, plus changes for fluctuations in construction costs as indicated by engineering cost indexes, and such additional sums as may be required to investigate, plan, construct, operate, and maintain public facilities for recreation, and fish and wildlife, and scenery conservation incurred under section 4 of the act.
In March 1967, the Bureau of Reclamation reported on its post-authorization planning for the project's power system, to the Interior and Insular Affairs Committee. My testimony updates and explains changes that have occurred since March of 1967 in support of the request for an increase in the appropriation ceiling for the project. That increase is associated with the costs for installing a second 100-megawatt unit and for construction of the expanded municipal and industrial water supply systems.

Section 7 of Public Law 87-590 authorized an amount of $170,000,000 for construction of the Fryingpan-Arkansas Project based on June 1961 prices. Application of the cost index factor to bring this amount to January 1973 price levels brings the total to be appropriated under the authorizing legislation to $314.8 million.

In order to accomplish the expanded power and M&I provisions of the project, it will be necessary to increase the authorized ceiling by $81 million to $395 million.

The total project cost of $461 million comprised of the $395 million, which is subject to ceiling restrictions, plus $66 million of section 4 and highway improvement costs.

In compliance with the information set forth in our 1967 letter, we proceeded to make plans for installation of two powerplants within the system; with an initial installed capacity of 100 megawatts and provisions for the latter installation of an additional 100-megawatt unit at Mt. Elbert Pumped Storage Powerplant (PSP), and 11 megawatts of installed capacity at Otero Powerplant.
We explained in our 1967 letter that the costs of the second 100-megawatt unit at Mt. Elbert PSPP when added to the other estimated project costs, would exceed the appropriation ceiling. At that time, we indicated that the initial 100-megawatt unit would be installed and the second 100-megawatt unit would be deferred until a market for the power developed. We further indicated that congressional authorization to cover the costs of the second unit would be sought when that market developed.

A study of the power market has expanded to include all of Colorado in recognition of the broader-based need for peaking power and the development of a project power plan, including transmission facilities that could provide service to a larger geographic area. That study indicates that 950 megawatts of peaking capacity would be required by 1980.

Currently, powerplants strictly for peaking in Colorado have a total installed capacity of 444 megawatts. The Fryingpan-Arkansas Project additions of 200 megawatts of installed capacity are the only additional major peaking power installations currently planned in Colorado. Even with the total project installed capacity in operation by 1980, there would remain about 295 megawatts of the peaking requirement that would have to be supplied from less efficient sources.

In addition, five preference customers and two private utilities have expressed an interest in purchasing all or part of the project peaking power. Therefore, it is concluded that a market for the second unit exists and will be utilized at the earliest date that construction can be accomplished.

In addition, the revenue from the 2nd unit is essential for project payback.
Initial construction of Mt. Elbert PSPP, the Mt. Elbert Forebay, and Twin Lakes Dam enlargement will include 7.3 million in costs specifically to accommodate the 2nd 100 MW unit installation. Installation of the 2nd unit and the 2nd penstock together with transmission and switchyard facilities will require an additional 25.5 million expenditures.

The $7.3 million included for facilities to accommodate installation of the second unit are committed and represent a "sunk" cost, irrespective of whether or not that unit is installed. The additional incremental costs associated with installation of the second unit, exclusive of transmission costs, would amount to about $195 per kilowatt of installed capacity. That amount is considerably lower than the costs of about $350 per kilowatt of installed capacity for coal-fired steam electric plants which have been recently constructed in the area.

It was originally estimated that about 59,000 acre-feet of the project water supply would be devoted to supplemental irrigation and about 20,500 acre-feet to municipal and industrial water supply. It is now estimated that ultimately about 22,200 acre-feet will be used for supplemental irrigation and about 57,300 acre-feet for municipal and industrial water supply. The Fountain Valley System would deliver about 36,000 acre-feet, the Arkansas Valley System would deliver 18,300 acre-feet, and the city of Pueblo would receive 3,000 acre-feet. The initial municipal and industrial water supply would be about 30,000 acre-feet and gradually build up to the ultimate use by the year 2020. Water not utilized for municipal and industrial purposes would be available and marketable for supplemental irrigation.
Return flows from the increased municipal and industrial water supply would be available for reuse either for municipal and industrial water or for irrigation water. It has been assumed that the return flows would be primarily utilized for irrigation.

The Fountain Valley System was originally designed to deliver project water to Colorado Springs only. The population in the area that could be served by the system nearly doubled between 1960 and 1970. The communities of Security and Widefield, which were not reported in the 1960 Census of Population, had a combined population of more than 15,000 in 1970. As a result of that dramatic growth, a survey of the communities that could be served by the Fountain Valley System was made. The result indicates that the communities of Fountain, Security, Stratmoor Hills, and Widefield will need project water in addition to a greatly increased demand by Colorado Springs.

The Arkansas Valley System was originally designed to deliver a supplemental water supply through a main line to communities between Pueblo and Lamar. Recent Colorado legislation and court decisions have made ground water supplies affecting surface water supplies subject to water-right appropriation. Many of the communities which depend on ground water supplies are being adjudicated to have junior water rights to surface appropriators. Thus, they must look for other sources if they are to maintain a dependable water supply. As a result, it is now anticipated that many of the communities will require a much larger proportion of their water supply from the project and that several communities not previously considered to be served from the system now require such service.
The estimated costs of the expanded municipal and industrial systems is about $90.2 million. Of that amount about $55.5 million exceeds the authorized appropriation ceiling under the provisions of section 7 of the authorizing act. All of the increase will be reimbursable with interest.

Section 1(c) of Public Law 87-590 which authorized the Fryingpan-Arkansas Project provides that:

"No part of the single purpose municipal and industrial water supply works involved in the Fryingpan-Arkansas project shall be constructed by the Secretary in the absence of evidence satisfactory to him that it would be infeasible for the communities involved to construct the works themselves, singly or jointly."

The Commissioner of Reclamation's report dated November 3, 1969, conclusively demonstrated that the various entities to be served by municipal and industrial delivery systems do not have the financial capability, either singly or jointly, to construct the works themselves. The Secretary of the Interior approved and adopted that report on December 5, 1969, thus fulfilling that requirement of section 1(c) of the act.

A second requirement of section 1(c) of that act is that the municipal and industrial delivery systems must be repaid with interest in a period consistent with the water user's ability to pay but not to exceed 50 years. Negotiations with the Southeastern Colorado Water Conservancy District are underway to contract for repayment of the reimbursable costs of the Fountain Valley Conduit. Repayment contract
negotiations for the Arkansas Valley conduit will be deferred pending further study of the alternative proposals for service by the conservancy district and the entities to be served.

The project remains economically justified with the addition of the benefits and costs for the facilities that would be included in the increased appropriation ceiling. The benefit-cost ratio would be 1.45 to 1.00 compared to a benefit-cost ratio of 1.48 to 1.00 at the time the project was authorized.

Repayment analyses for the project show that the project costs could be repaid within the required 50-year period with the second 100-megawatt unit installed. Without the second unit, an increase in power rates or municipal and industrial water supply rates would be required to achieve project payout. Power rates would have to be increased from $24 to $30 per kilowatt-year for capacity, with energy at 4-1/2 mills per kilowatt-hour. With the rapidly increasing costs for alternative sources of peaking power, that range of rates would be competitive. If an increase in municipal and industrial water rates is required to achieve payout the cost of water would escalate from $111 to $136 per acre-foot for the Fountain Valley users, and from $187 to $212 per acre-foot for the Arkansas Valley users.

The facilities that would be installed with the authorized increase in appropriation ceiling are needed and supported by local interests and by the executive branch.

Therefore we recommend favorable action HR 13816.