Report of The Committee
On Cogeneration And
Small Power Production Facilities

The major developments in the field of cogeneration and small power production have been the court challenge to the Federal Energy Regulatory Commission's (FERC or Commission) regulations implementing Section 210 the Public Utility Regulatory Policies Act of 1978 (PURPA) and state utility commission implementation of those regulations. Since this is the Committee's first report, we will review developments from 1981 in order to fully inform the reader.

I. Judicial Developments

There are two recent cases pertinent to cogeneration and small power production development. The first is Federal Energy Regulatory Commission v. Mississippi, in which the Supreme Court overturned a Mississippi federal district court decision declaring Titles I and III, and Section 210 of Title II of PURPA unconstitutional on the grounds that they were beyond the scope of Congress' power under the Commerce clause and were an invasion of state sovereignty in violation of the Tenth Amendment.

Quickly dismissing the District Court's analysis of the Commerce Clause issue, the Court stated that the applicable standard for assessing the validity of federal legislation promulgated under one of Congress' plenary powers is whether there is a rational basis for a Congressional finding that the regulated activity affects interstate commerce and whether there is a reasonable connection between the regulatory means selected and the legitimate objective, as explained in Hodel v. Indiana. Using the Hodel test, the Court found that the District Court's analysis entirely disregarded the specific congressional finding in Section 2 of PURPA that the regulated activities have an immediate effect on interstate commerce. The Court also noted that there is ample support for this finding, citing the Act's extensive legislative history.

Regarding the lower court's Tenth Amendment holding, the Supreme Court concluded, inter alia, that the Section 210 question was the easiest to resolve. First, the Court found that insofar as Section 210 authorizes FERC to exempt qualifying facilities from state laws and regulations, it did nothing more than allow traditional preemption of conflicting state regulation of transactions between utilities and cogenerators. The Court reiterated that the propriety of this type of legislation - if it is a valid exercise of the Commerce power - is allowed even though this serves to curtail or prohibit the state's legislative choices concerning subjects they may consider important. Second, the Court found that Section 210's requirements that state regulatory authorities implement appropriate rules for the purchase and sale of cogenerated power to utilities was constitutional because state commissions of

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2 The Committee was formed in January 1982, and a seminar was held on April 2, 1982, but no report was prepared for the year 1981.
6 102 S.Ct. at 2134-35.
competent jurisdiction are simply required to open their doors to qualifying facilities making a claim under federal law,\(^a\) citing Testa v. Katt.\(^9\)

In American Electric Power Service Corporation v. FERC,\(^a^9\) (the AEP decision), the U.S. Court of Appeals for the District of Columbia Circuit vacated the full avoided cost and interconnection rules established by the Commission pursuant to Section 210 of PURPA. American Electric Power (AEP) and other public utilities challenged FERC's cogeneration regulations in the D.C. Circuit on four specific issues: the full avoided cost rule; the simultaneous transaction rule; the interconnection rule; and the Commission's failure to adopt "fuel use" criteria in determining which cogeneration facilities are "qualifying" facilities eligible for the benefits of PURPA.

The full avoided cost rule was vacated by the D.C. Circuit on the grounds that the Commission inadequately justified its adoption of the standard.\(^1^1\) Under Section 210 of PURPA, the Commission was directed to prescribe rates that satisfy three criteria: the rates must be just and reasonable to consumers, not discriminate against qualified facilities, and be in the public interest. The court found that, instead of balancing all three criteria, the Commission came to "the simplistic and uniform conclusion that the full avoided cost standard would be just and reasonable in every case and that this was necessary to encourage cogeneration in every case."\(^1^2\)

Although the court conceded the full avoided cost rule might be appropriate, it vacated the rule and ordered the Commission to clarify its reasoning and findings\(^1^3\). The court held that the Commission had failed to demonstrate the factual basis for its conclusion that a less than full avoided cost rate would result in insignificant savings to consumers. While the impact of the Commission's rules will always be less per consumer than per generator, the court observed that if cogeneration becomes a substantial source of electricity, then a rate set at the statutory ceiling could be quite costly to consumers.

The court also vacated the Commission's rule for mandatory interconnection of qualifying facilities on the grounds that it was inconsistent with the Federal Power Act, as amended by PURPA. Section 210(b) of the Federal Power Act as amended\(^1^4\) requires the Commission to give appropriate notice and opportunity for hearing to interested parties before issuing an interconnection order. Section 210(c) provides that the Commission may order an interconnection with respect to a qualifying facility only after finding that the interconnection is in the public interest, encourages conservation of energy or capital, optimizes the efficient use of facilities

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\(^a\)Id. at 2138.


\(^1^1\)Id. at 1292.

\(^1^2\)Id. at 1293.

\(^1^3\)FERC's reasons for adopting the full avoided cost rule were threefold. First, the Commission believed that the rule furthered PURPA's goal of encouraging cogeneration and small power production splitting the savings with consumers would result in insignificant savings and possibly a diminished incentive for cogenerators which more than offset the consumer's gain. Second, it believed that a rule which took into account the cogenerator's costs would require a traditional rate-setting approach and Congress intended to exempt qualifying facilities from such traditional regulation. Lastly, the Commission found that the full avoided cost rule did not harm consumers because they will pay the same rate that they would have paid if a utility had not purchased energy or capacity from the qualifying facility. Id. at 1293.

\(^1^4\)16 U.S.C. § 824i(b).
and resources or improves a utility system's reliability, and meets the requirements of Section 212 of the Act.\footnote{15}

Most importantly, Section 210(e)(3) of PURPA states that no qualifying facility may be exempted for Sections 210, 211, or 212 of the Federal Power Act.\footnote{16} Against these statutory mandates, the Commission promulgated the interconnection rule which requires "any" electric utility to make the interconnections necessary to accomplish purchases or sales with "any" qualifying facility,\footnote{17} and established the state regulatory authorities as the forums for resolution of interconnection disputes.

The court seized upon the language "any utility" and "any cogenerator," stating that the Commission is, in effect, exempting qualifying facilities from the requirements of Sections 210 and 212 of the Federal Power Act.\footnote{18} FERC's primary meaning of those statutory sections would impose an undue burden on qualifying facilities. The court dismissed this argument noting that the Commission was not required to impose a substantial administrative burden on cogenerators, but could streamline its procedures. If the Commission believed that streamlined procedures were too burdensome, the necessary amendment must come from Congress, the court added.\footnote{19}

The court upheld the Commission's simultaneous purchase and sale rule\footnote{20} which permits a qualifying facility to assume that the electricity it generates for its own purposes is simultaneously purchased by a utility and sold back to it. These regulations allow a qualifying facility to sell all of its output at a utility's full avoided cost and to purchase electricity at the retail rate. AEP argued that the Commission misconstrued the terms "purchase" and "sale" in violation of Section 210(a) of PURPA,\footnote{21} when it required utilities to treat cogenerators as purchasers when in fact no purchase might have taken place. AEP also argued that the Commission did not adequately consider or explain its decision to require utilities to engage in the simultaneous transaction fiction.

The court upheld the simultaneous transaction rule because it was persuaded that, in the absence of the rule, qualifying facilities which consume all of the energy they produce would be treated differently from those which sold surplus output to utilities. The court stated that PURPA may require the simultaneous transaction rule because PURPA requires nondiscriminatory rates.\footnote{22} In the absence of the rule and assuming no physical purchase or sale between a qualifying facility and utility, the court found that a cogenerator could end up paying more for its power than a non-cogenerator.

Finally, the court found that the Commission was not required to include criteria relating directly to "fuel use" in its rules for determining qualifying facility status. The court found that PURPA gave the Commission discretion to prescribe requirements which include fuel use, but did not require it to do so. The court also found that the Commission's analysis of the advantages and disadvantages of fuel use criteria was a "reasoned, adequate response to the charge Congress gave it in

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  \item \footnote{16} 16 U.S.C. § 824i(c). Section 212 requires, \emph{inter alia}, a finding that the interconnection is unlikely to result in a reasonably ascertainable uncompensated loss for any utility or cogenerator, will not place an undue burden on any party, and will not unreasonably impair the reliability of the utility or the utility's ability to render adequate service to its customers. 16 U.S.C. § 824k.
  \item \footnote{17} 16 U.S.C. § 824a-3(e)(3).
  \item \footnote{18} 18 C.F.R. § 292.303(c)(i).
  \item \footnote{19} 675 F.2d at 1239.
  \item \footnote{20} 675 F.2d at 1239-40.
  \item \footnote{21} 18 C.F.R. § 292.304(b)(4).
  \item \footnote{22} 16 U.S.C. § 824a-3(a).
\end{itemize}
Section 201 of PURPA.  FERC petitioned the court for rehearing and suggested that the rehearing be en banc. Due to several recusals suggestion of rehearing en banc was denied by the original panel in a 3-2 vote.

Both the Commission and one of the intervenors, the American Paper Institute, appealed the court's decision to the U.S. Supreme Court which granted a writ of certiorari. Oral argument was heard March 22, 1983 and a decision is expected at the end of the Court's term in June. The issues facing the Court are limited to the lower court's decision to vacate the full avoided cost and interconnection rules.

II. Administrative Developments

While the substantial issues concerning rates, purchase obligations and interconnection requirements are being implemented by state regulatory authorities under Section 210(f) of PURPA, the FERC has an ongoing role under Section 201 of PURPA in determining qualifying status of facilities. Most certifications of qualifying status are routine, but the Commission has issued two major decisions clarifying the definition of waste as a fuel for small power production. In Stieren Farms, the Commission effectively skirted the 25 percent energy input rule for natural gas and held that methane gas taken from the shafts of an abandoned coal mine was "waste" as defined by Section 201 of PURPA and § 292.202(b) of its rules and therefore eligible to be used as a primary energy source for a qualifying facility. The Commission found that the proposed fuel fit its Section 292.202(b) definition of natural gas because the Commission's definition is the same as that found in the Natural Gas Policy Act (NGPA), a companion act to PURPA. The NGPA specifically included "occluded natural gas produced from coal seams" in its definition of high-cost natural gas. The proposed fuel was also found to be "waste" as defined by the Commission's regulations because the applicant showed that the gas was unsuitable for pipeline use.

The Commission resolved the conflict it created by excluding "waste" natural gas from the calculations under Section 292.204(b)(2) of its regulations for determining the energy input of a facility. The Commission buttressed its decision by noting that PURPA was only one component of the National Energy Act and that another component, the Power Plant and Industrial Fuel Use Act (FUA), did not prohibit unmarketable natural gas from being burned in electric power plants. Thus, the Commission found that FUA arguably favors allowing "waste" natural gas to be used as a primary energy source in a small power production facility.

\[^{23}\text{Id. at 1242.}\]
\[^{24}\text{Id. at 1246.}\]
\[^{26}\text{Editor's Note: The Supreme Court's May 16, 1983 decision reversing the holdings of the D.C. Circuit is reported at 51 U.S.L.W. 4547.}\]
\[^{27}\text{17 FERC 61,509 (Dec. 21, 1981).}\]
\[^{28}\text{Id. at 61,509. The Commission noted that waste is an economic concept referring to materials whose costs of salvage or marketing exceed the costs of disposal.}\]
\[^{29}\text{Id. at 61,510.}\]
The Commission refined its interpretation of "waste" natural gas in *Tulsa Energy Corporation*, where it found that natural gas from a shut-in gas well or from an oil well was not "waste" as defined in § 292.202(b) of its rules. The Commission stated that in order to be defined as "waste" natural gas, the natural gas must be both a by-product material and have no commercial value. Since the applicant proposed to use natural gas from two sources, the Commission considered each source and held that neither qualified as "waste" because neither was a by-product.

Chairman Butler dissented from the Commission's finding that flared natural gas from an oil well did not qualify as waste. He argued that the Commission's decision results "in unnecessary and flagrant waste of energy resources" and runs contrary to PURPA. The Chairman pointed out that the reason natural gas from oil wells is often flared is because it cannot be stored on the premises and must be delivered into a gathering line connected with a pipeline facility. If the quantity is too small, the pressure too low, the quality inferior, or the distance to the facility too great, marketing to a pipeline may be economically infeasible. Although the Chairman conceded that in some instances it may be economic to sell the gas, he apparently favors viewing oil-well gas on a case-by-case basis, because he stated that he would hold that such gas as is being flared or vented qualifies as "waste" natural gas and therefore is a permissible primary fuel for small power production.

In *Resources Recovery (Dade County), Inc.*, the Commission addressed the scope of its jurisdiction over 30 to 80 megawatt small power production facilities. The applicant, a qualifying 76 megawatt small power production facility, filed a proposed initial rate schedule for sales of energy and capacity to Florida Power and Light Company (FP&L), which sought rejection of the filing, or alternatively, a hearing under Section 206 of the Federal Power Act.

The Commission accepted the filing, subject to refund. The Commission found that although Resource Recovery's facility was subject to the Federal Power Act, the Conference Report accompanying PURPA indicates that the Commission should apply PURPA pricing principles to rates for sales subject to the Commission's jurisdiction. The rate submitted by Resources Recovery was a formula-rate based on the Florida Public Service Commission's PURPA order applicable to Florida Power & Light Company. Since this formula was established in compliance with FERC regulations, the Commission found it to be just and reasonable.

The Commission also granted a number of waivers to Resources Recovery, including waiver from its cost of service regulations and portions of its accounting, reporting and corporate regulations.

In March 1981, the Commission issued a rulemaking to implement Section 643 of the Energy Security Act of 1980, which was enacted to encourage the development of geothermal energy. In Order No. 135, the Commission extended the definition of qualifying facility to include geothermal facilities of up to 80 megawatts. Order No. 135 is significant because it is the Commission's first decision on extending benefits under PURPA to facilities which are more than 50 percent

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29. 19 FERC ¶ 61,331 (June 25, 1982).
30. Id. at 61,632.
31. Id. at 61,633-34.
32. 18 FERC ¶ 61,245 (March 12, 1982), 19 FERC ¶ 61,188 (May 24, 1982) and 20 FERC ¶ 61,138 (August 3, 1982).
owned by an electric utility. In this rulemaking, the Commission granted an exemption from the Public Utility Holding Company Act of 1935, but reserved for future determination whether the other exception and rate privileges under PURPA Section 210 would be extended to utility-owned geothermal small power production facilities. As of the date of this writing, it has made no determination.

On September 1, 1982, the Commission issued a notice of proposed rulemaking proposing certain filing fees. If the proposals were adopted, qualifying facilities applying for Commission certification of qualifying status would be subject to a $2,600 filing fee. In addition, small power production facilities between 30 and 80 megawatts which are subject to the provisions of the Federal Power Act would be subject to the filing fees applicable to public utilities generally.

III. LEGISLATIVE DEVELOPMENTS

In 1982 two bills were introduced in the 97th Congress to amend Sections 201 and 210 of PURPA; both bills died in committee while Congress waited for the Supreme Court to hear and decide the AEP case, which is discussed above. The two bills, H.R. 6500 and S. 1885, as amended, would have required the full avoided cost standard as a matter of federal policy. Both bills would have permitted state regulatory authorities to establish different rates for purchases from qualifying facilities if the state commissions could show that the differing rates were high enough to encourage cogeneration, did not discriminate against qualifying facilities, and were in the public interest. They would have required utilities to interconnect with qualifying facilities, but the facilities would have been required to pay a reasonable cost for such interconnection. As a result of the AEP decision overturning the Commission's full avoided cost and interconnection rules, FERC supported an amendment to PURPA which would require utilities to purchase cogenerated power at their full avoided cost. In the 98th Congress two bills with provisions similar to H.R. 6500 and S. 1885 have been introduced: H.R. 1595, the Solar Energy National Security and Employment Act of 1983, and S. 616, known as the Renewable Energy Small Business Development Act of 1983. Both bills are in committee where there is little likelihood of action being taken on them pending the Supreme Court's decision in the AEP case.

IV. STATE DEVELOPMENTS

In 1981 and 1982, many state regulatory authorities began issuing decisions implementing Section 210 of PURPA. The various approaches taken by some state authorities to determine full avoided costs in light of the AEP decision are discussed below.

The New York Public Service Commission (NYPSC) issued a decision implementing Section 210 in Consolidated Edison Company of New York. Despite the AEP decision NYPSC adopted the full avoided cost standard for qualifying facilities' sales.

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3948 PUR 4th 94 (May 12, 1982).
to utilities on the grounds that all of the issues raised by the D.C. Circuit were thoroughly litigated in the Consolidated Edison proceeding.40

In determining full avoided costs, the NYPSC decided to determine a utility’s marginal energy cost by its “marginal financial lambda,” the average of the New York Power Pool dispatch lambda and the utility’s internal system lambda for any given level of production. Marginal capacity costs that vary with system peak loads were also considered to be avoidable — these were limited to transmission costs. In addition to PURPA, New York has its own law under which qualifying facilities must be paid a minimum of six cents per kilowatt hour for power sold to a utility.41

The Maine Public Utilities Commission (MPSC) established its policy on full avoided costs in Cogeneration and Small Power Production.42 The full avoided costs standard was adopted and defined as avoided energy and capacity costs computed on the basis of the cost difference between a utility’s existing overall plan for construction of new generating capacity and a revised construction plan designed to account for new power supplies available for cogenerators. Avoided energy costs are defined to include avoided operating and maintenance costs and distribution and transmission line losses. For purposes of setting rates for sales to utilities, the Commission established a rebuttable presumption that a utility’s avoided operating and maintenance costs are three mills per kilowatt-hour. On rehearing of its decision,43 MPSC reconsidered its adoption of the full avoided costs standard in light of the AEP decision and reaffirmed its decision based on a Maine statute.44

The California Public Utilities Commission (CPUC) issued its decision implementing Section 210 of PURPA in Rulemaking on the Commission’s Own Motion to Establish Standards Governing the Prices, Terms, and Conditions of Electric Utility Purchases of Electric Power Cogeneration and Small Power Production Facilities.45 CPUC designed a standard offer for the utilities under its jurisdiction buying power from qualifying facilities. Purchases under a standard offer are per se reasonable and a utility’s expenses for such purchases will be recoverable as other purchased power expenses are without further review in general rate proceedings. These standard offers apply to qualifying facilities of more than 100 kilowatts. “As-available” power, based on avoided costs calculated at the time of delivery, are based on the short run marginal cost of electricity production in the utility system. Short-run marginal costs, under CPSC’s decision, are the highest variable operating cost per unit of electricity produced at a given time plus a shortage cost which reflects the effects of the added increment of production on reserve margins and reliability. Qualifying facilities will receive 100 percent of the shortage value in cents per kilowatt-hour and these payments are based on its actual performance. The purchase price varies by time of day and year.

Standard offers involving long-term commitments are based on projections of avoided costs; however, the avoided costs are based on expected short-run marginal costs that the utility will avoid through purchases from qualifying facilities at each point in time over several time periods. The price includes an energy component which is tied to short-run marginal costs in each period and a capacity component which is tied to short-run marginal shortage costs in each time period. Energy payments will be allowed for up to five years and firm capacity payments for up to thirty years.

40Ibid. at 107-108.
41N.Y. Public Service Law, § 66-c (McKinney 1982 Supp.).
4242 PUR 4th 536 (May 7, 1981).
43Cogeneration and Small Power Production, 47 PUR 4th 327 (July 9, 1982).
45OIR-2, Decision 82-01-103 (Jan. 21, 1982).
CPUC also established a long-term avoided cost offer based on projected long-run marginal costs. Long-run marginal costs are defined as the capital and operating costs of marginal additions to the utility's generation capacity. The avoided cost price offer based on long-run marginal cost is expected to be a more stable pricing alternative and to place qualifying facility investment on an equal footing with utility investments. This standard offer for firm energy and capacity will be for periods up to thirty years. CPSC recognized that there is debate on the development of long-run marginal cost projections, so it reserved for further review the issue of the relationship of energy and capacity in the long-term standard offer. No action has been taken on this issue as of this writing.

In Pacific Gas and Electric Company, CPUC turned to the fuel side of qualifying facilities, and set the natural gas rate for qualifying facilities equal to that for wholesale electric utility generating plants. This decision, according to the CPSC, was rational and consistent with avoided cost principles since the cogenerators gas rate would be at the same level than an electric utility would have paid if it consumed the gas. The Commission tied the amount of gas which will qualify to the volume of gas which a utility would have consumed to generate the same number of kilowatt-hours, thereby relating the energy savings achieved to the fuel costs avoided by the utility generating plant.

The Idaho Public Utilities Commission (IPUC) has issued three noteworthy orders pertaining to full avoided cost rates for qualifying facilities. In the first, Rulemaking Proceeding for Consideration of Cogeneration and Small Power Production, IPUC decided that "as available power" corresponds to non-firm power sales which do not allow a utility to avoid capacity costs and therefore should be priced at the system's avoided incremental energy cost. IPUC decided that energy costs would be determined under the principles of economic dispatch and will base energy costs on these incremental costs, not average system costs. Washington Water Power Company and the Pacific Power and Light Company based their avoided energy costs on a computer model which takes into account historical stream flows, thus proposing an annual rate for avoided energy costs. This methodology was found to be appropriate. The Idaho Power Company, with little hydroelectric storage, proposed to establish a price for energy at the time the qualifying facility delivers its power; this approach was also accepted. Idaho Power also offered additional security to qualifying facilities by proposing to purchase power up to the price at which it is able to sell the power off-system. The IPUC fully supported this proposal.

The IPUC determined that avoided capacity costs for long-term contract purchases by all utilities subject to its jurisdiction will be based on the present value difference between an optimal capacity expansion plan without purchases from qualifying facilities and a new optimal expansion plan resulting from the inclusion of the output of the qualifying facilities. For these long-term obligations, avoided energy costs will be based on the marginal energy costs associated with a utility's new additions of base-load units.

In a later decision, Rulemaking Proceeding for Consideration of Cogeneration and Small Power Production, the IPUC held that avoided capacity costs could not be adjusted downward by a utility to reflect the utility's unamortized investment tax credits, but should reflect the cost of flue gas desulfurization installations for coal-fired generating units. The Commission also found that avoided capacity costs should be computed using a hypothetical capital structure of 50 percent debt,
10 percent preferred equity, and 40 percent common equity and should reflect the common equity return rate most recently determined to be just and reasonable by the Commission.

In *Idaho Power Company*, IPUC found that a facility may qualify for avoided capacity cost payments in excess of its actual nameplate capacity because the supply of firm energy enables the utility to store hydroelectric potential energy and a utility’s fixed costs are not incurred solely for the purpose of providing capacity. The Commission also chided Idaho Power Company for failing aggressively to seek power from qualifying facilities, and it stated that this failure will be grounds for rejection for applications for certificates of public convenience and necessity regarding the construction and financing of conventional thermal facilities.

The Idaho Commission was not content simply to comment on Idaho Power’s lack of effort, however. At the same time, in a pending Idaho Power rate proceeding, it decreased the company’s rate of return on common equity by one-half percent on the grounds that Idaho Power had failed adequately to pursue cogeneration contracts. Similar actions have been taken in other states. In a recent general rate case, Central Maine Power Company’s rate of return was decreased from 15.5 percent to 15.4 percent because the MPUC found that Central Maine had disregarded its policy requiring utilities to pursue long-term cogeneration contracts and simultaneous sale and purchase agreements. MPUC’s decision to hold Central Maine to a 15.4 percent return on equity was recently upheld by the Maine Supreme Court. Both Pacific Gas and Electric Company (PG&E) and Southern California Edison Company (SCE) were penalized by CPUC. PG&E’s rate of return was reduced by $7 million per year for two years for failure to develop cogeneration. SCE’s rate of return was penalized $3.9 million for 1983 and $4.1 million for 1984 for failure to offer full avoided cost prices to qualifying facilities.

There are limitations on state action, however. The New Hampshire Supreme Court struck down an order of the state Public Utilities Commission which established a minimum rate at which all utilities must purchase electric power from qualified facilities in *Appeal of Granite State Electric Company*. Because the PUC had based the utility’s rates for qualifying facility purchases on the avoided costs of another utility, the court found there was an insufficient basis to support the rates with respect to Granite State Electric. The court also found that the PUC had no authority to establish a minimum avoided cost rate for the life of a qualifying facility.

This survey of state developments is not intended to be comprehensive. Rather it is intended to provide a flavor of the way in which state regulatory authorities are implementing the authority delegated to them under Section 210 of PURPA.

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48 Southern California Edison Company, Decision 82-12-055 (December 1982).
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