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E-002/GR-91-165

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS

FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION

In the Matter of the Application of FINDINGS OF FACT,
Northern States Power Company (NSP) CONCLUSIONS AND
for Authority to Increase Its Rates RECOMMENDED ORDER--
for Electric Service in Minnesota PART II--(RATE DESIGN)

Part I of the Findings of Fact and Conclusions of the Administrative Law Judge in the above-captioned matter was issued on September 30, 1991. Part I includes Findings and Conclusions regarding Revenue Requirements, Conservation and Post-Hearing Motions. This Part II includes Findings and Conclusions relating to Rate Design and any remaining issues. This Part also contains a Recommended Order which relies on the Findings and Conclusions contained herein and in Part I. The record in this matter closed on September 17, 1991.

Based upon all of the proceedings herein, the Administrative Law Judge makes the following additional:

FINDINGS OF FACT

RATE DESIGN

Principles of Rate Design

263. The Company bears the burden of proof that the proposed rate design is just and reasonable and not unreasonably prejudicial, preferential or discriminatory. Minn. Stat. 216B.03, 216B.16, subd. 4.

264. When the Commission allocates the revenue deficiency among classes of customers to provide for the recovery of a revenue requirement, it acts in a quasi-legislative capacity. *Hibbing Taconite Co. v. Minnesota Public Service Commission*, 302 N.W.2d 5, 9 (Minn. 1980); *St. Paul Area Chamber of Commerce v. Minnesota Public Service Commission*, 312 Minn. 250, 262, 251 N.W.2d 350, 358 (1977).

265. The Minnesota Supreme Court has stated expressly that both cost and non-cost factors must be considered in designing rates. *Reserve Mining v. Minn. Public Utilities Commission*, 334 N.W.2d 389, 393 (Minn. 1983).

266. The principles of rate design governing the exercise by the Commission of its quasi-legislative authority may be summarized as follows:

1. Rates should be designed to provide the company with a reasonable opportunity to earn its revenue requirement as determined in the proceeding;
2. Rates should provide a reasonable continuity with past and future rates to prevent inordinate and immediate impact on existing and future customers;
3. Rates should be as simple, understandable and easy to administer as is practical.

In *Reserve Mining v. Minn. Public Utilities Commission*, supra, the Minnesota Supreme Court listed the following relevant non-cost factors: whether the rates would be disruptive; revenue stability; affordability; the ability to pass costs on to others; and the ability to decrease the impact of a rate increase through tax deductions.

Embedded Cost of Service Studies

267. Cost-based rates are consistent with promoting rate design objectives. They encourage efficient use of energy just as prices in a competitive market facilitate an optimal allocation of society's resources. In an ideal competitive market, prices are determined by market forces which, in turn, tend to set prices based on the marginal costs of production. By providing customers with appropriate pricing information regarding the costs they impose on the system, cost-based rates encourage customers to use energy more efficiently.

Cost-based rates are also fair. They promote the design goal of cost responsibility, assuring that those causing the imposition of costs for providing utility service are responsible for paying those costs. Since it is extremely difficult to determine the specific costs each individual customer imposes on a utility's system, it is appropriate to group customers into classes for the purposes of determining rates, and then to design rates such that the class responsible for imposing certain costs on the system is largely responsible for paying such costs.

268. NSP's Embedded Class Cost of Service Study (CCOSS) provides an appropriate benchmark for evaluating proposed class revenue requirements.

269. NSP's Embedded CCOSS is found to be reasonable, if modified as recommended by the DPS. The three modifications advanced by DPS concern conservation expenses, load management capital costs and economic development expenses. The Department also recommends that the PUC order NSP to study its method of classifying and allocating distribution

costs.

270. NSP's stratification of production plant costs is reasonable.

271. It is appropriate to modify NSP's embedded CCOSS so that conservation costs are classified as 55.6% capacity-related and 44.4% energy-related, in place of NSP's proposed 50/50 split. The Department recommendation reflects the relative proportion of NSP's test year expenses that will be incurred to lower peak loads (capacity-related), and to reduce energy consumption. The appropriate capacity and energy allocators are D10 and E20, respectively. Such a modification assures that classification of conservation expenses reasonably reflects the reasons for which the costs were incurred.

272. The DPS maintains that the Company's embedded CCOSS must be modified to require that load management capital costs are classified 97.5% capacity-related and 2.5% energy-related as opposed to NSP's proposed 50/50 split. The capital costs for the load management program are carrying costs of hardware NSP needs to control air conditioning and water heating loads. The DPS position properly reflects the reasons such costs are incurred, to save both capacity and energy. Again, the DPS maintains these costs should be allocated to each class based on the class's contribution to NSP's total capacity and energy costs using allocators D10 and E20.

273. The Department argues that economic development operation and maintenance (O & M) expenses be classified as 59.3% capacity-related and 40.7% energy-related, rather than the Company's proposed 50/50 split. Because costs should be allocated to reflect the reasons they are incurred, and because NSP encourages economic development in part to lower its per unit capacity and energy costs, economic development O & M expenses must be allocated according to the contribution of each class to NSP's total capacity and energy costs, the Department maintains. Again, it argues for allocation using allocators D10 (capacity) and E20 (energy).

274. It is appropriate that the specific differentiation in cost responsibility for conservation expenses, load management capital costs and economic development expenses, as recommended by the DPS, be adopted as part of NSP's CCOSS.

275. It is appropriate to adopt the DPS recommendation for an Order by the PUC that NSP must study its method of classifying and allocating distribution costs for presentation in its next rate case filing, along with appropriate adjustments to its cost study resulting from examination of the distribution costs. Such an Order is appropriate because NSP is not recognizing certain load-carrying capabilities of its minimum distribution system.

The Company imputes a minimum distribution system to derive a cost breakdown between customer and demand costs related to its

utility distribution plant, which extends service to customers and is necessary to meet peak demand requirements. The minimum distribution system imputed assumes that if a utility were concerned only with extending service to customers and meeting their minimum requirements, it would build the smallest possible distribution system. Therefore, costs remaining in excess of those needed for the theoretical "minimum" system are allocated to demand costs. Installation of the theoretical system is classified as customer-related. The concern is for a possible double-counting of demand costs under an imputed minimum distribution system. The double counting appears to arise because NSP's use of a minimum distribution system does not recognize the system's load-carrying capability when allocating remaining (capacity-related) distribution costs. The DPS maintains that a study of this phenomenon, properly recognizing the load-carrying ability of the minimum distribution system, will result in a downward adjustment of the demand allocator.

It is appropriate for the PUC to Order the Company to undertake the distribution cost study advocated by the DPS as noted above, and present its results in its next general rate case filing.

276. Champion International Corporation (Champion) proposed an embedded cost study that classifies plant production costs into two categories: fixed and variable. Fixed costs are allocated on the basis of the class contributions to the single summer system peak. This same Fixed/Variable methodology has been proposed and rejected by the Commission in each of the past four NSP electric rate cases. If rates were based on such an allocation, Champion contends current subsidies provided to the residential class by commercial and industrial customers would be curtailed.

277. NSP argues that the Fixed/Variable cost study proposed by Champion does not reflect the economics of power production and should be rejected.

278. In the alternative, Champion proposed a Capital-Fuel Substitution (CFS) cost study that stratifies both production plant costs and fuel costs into demand and energy-related portions. Champion urged that if the capital costs of a baseload plant in excess of capital costs for a peaking plant are energy-related, then the fuel costs of a peaking plant in excess of fuel costs for a nuclear plant are capacity-related.

279. NSP and the DPS argue that the Capital Fuel Substitution (CFS) method proposed in the alternative cost study by Champion ignores the economics of system planning and allocates costs inappropriately. They maintain the assumption that peaking-plant fuel costs in excess of fuel costs for a nuclear plant are capacity related, and therefore are incurred to meet the system peak demand, is incorrect since these "excess" fuel costs are incurred in all hours of the year. They argue that the CFS cost study is also inconsistent with established Commission precedent and does not reflect the economics of power production.

280. The basis for Champion's arguments is that a utility's

sole reason for installing peaking units is to obtain cheap capacity. Champion Witnesses Eisdorfer and Kalcic assert that if a utility were only obligated to meet its energy requirements, it would install only baseload units. From this, they conclude that any fuel costs a utility incurs that are above the fuel costs it would have incurred by generating all energy from its most efficient baseload unit must be considered capacity costs.

281. NSP and the DPS maintain that the Fixed/Variable methodology advanced by Champion fails to recognize the economics of system planning or factors which drive a utility to choose a particular mix of generating units. They maintain that while it is possible to hypothesize a utility providing capacity only, it is impossible to hypothesize a utility serving its customers' energy requirements without having an actual plant and the concomitant capacity to generate such energy.

282. It is appropriate to reject Champion's fixed-variable method of classifying production plant costs, which is based on the argument that NSP's stratification (capital substitution) method used to classify production plant costs is flawed for allocating such costs on the basis of energy consumption and demand rather than solely by demand. Champion asserts that all variable costs are energy-related and all fixed costs are capacity-related.

283. Champion's claim that capacity-related production and transmission expenses should be allocated on the basis of classes' contributions to NSP's summer coincident peak should be rejected because it is based on an erroneous assumption that class contributions to the Company's winter peak entail no additional costs. There are additional costs, specifically opportunity costs, incurred as a result of any increase in winter peak which limits NSP's opportunities for selling or exchanging capacity during the winter.

284. Further, Champion claims that NSP's stratification is flawed for failing to recognize that if capital (in the form of higher baseload capital costs) can be used as a substitute for fuel costs, then fuel costs (in the form of per-unit fuel costs for peaking units) can be used as a substitute for capital costs. This is the basis for Champion's Capital-Fuel Substitution (CFS) alternative costs study.

285. Champion witnesses have proposed adoption of similar methodologies in the past five NSP rate cases. The Commission has not adopted Champion's methodology in any of those cases.

286. It is appropriate to reject the Fixed/Variable method and find that NSP's stratification of plant costs is reasonable. Champion's alternative cost study based on Capital Fuel Substitution methodology should also be rejected in this proceeding. The Administrative Law Judge agrees with the criticisms advanced by NSP and the DPS.

287. North Star and Metalcasters

of Minnesota (MCM) criticize NSP's Embedded Cost Study on the basis that it overstates the generation and transmission (G & T) capacity costs imposed by interruptible customers.

NSP's allocation of winter capacity-related costs to Peak-Controlled Interruptible customers is reasonable. NSP allocates G & T capacity costs assigned to the winter season based on the classes' projected contributions to the Company's coincident winter peak. The Intervenor contend that since NSP can curtail interruptible customers during the winter when system reliability is endangered, such customers should not be allocated any generation and transmission capacity costs. Since such customers are virtually never interrupted during the winter, it is appropriate to treat the winter interruptible loads as being essentially firm for costing purposes.

288. The Embedded Class Cost of Service Study proposed by NSP is reasonable, accurately reflects the economics of power production, and is consistent with established Commission precedent. It is appropriate to adopt NSP's Embedded Cost Study, as modified by the proposals of the DPS.

Marginal Cost Studies

289. In its initial filing, NSP provided a Marginal Cost of Service Study. Marginal Cost is the cost of producing an additional unit of a good or service. The Company calculates marginal energy, capacity and customer costs. It uses its production-cost model to estimate marginal energy costs for each of its three costing periods (summer peak, winter peak and annual off-peak). NSP derives long-run estimates of marginal capacity costs by period and annual customer costs based on historical relationships between expenses and peak loads for the number of customers.

The purpose of calculating marginal costs for electric utilities is to meet the rate design goal of promoting an efficient allocation of resources. A way to achieve this goal is to set prices as if electricity were produced in a competitive market. Regulators then estimate the marginal cost of providing various services and use such estimates when designing rates.

290. The DPS is in general agreement with NSP's approach to estimating marginal costs. No other intervenor commented on this issue. Only NSP provided a marginal cost study in this proceeding. The Company's approach is similar to that supported by the Department in NSP's prior two general rate cases, as well as in the most recent general rate cases of Minnesota Power and Otter Tail Power.

291. The Marginal Cost Study proposed by NSP in this case is reasonable and it is appropriate to adopt it for purposes of this rate case.

Class Revenue Allocations

292. In its initial filing, the Company proposed across-the-board increases with respect to the two major customer classes, 8.1% to the Residential class and 8.1% to the Commercial and Industrial class, which is the same percentage amount as its general rate increase request. It also proposed a 2.3% increase in Public Street and Highway Lighting and an 8.3% increase in Other Sales to Public Authorities.

The DPS reviewed its own Embedded CCOSS and compared NSP's proposed levels of revenue responsibilities to current revenues collected from each class and to current costs assigned to each class. For nearly every class, the Company's proposed revenue apportionment moves the customers' responsibilities closer to their assigned costs. The DPS thus recommends adoption of NSP's overall class revenue allocations.

NSP's proposed apportionment of revenue responsibility is found to be reasonable, and it is appropriate for the PUC to adopt it.

293. On behalf of Champion, Mr. Eisdorfer recommends that existing intraclass subsidies be reduced by one-half with the constraint that no class receive a revenue decrease. The subsidies referred to are calculated based on the Capital Fuel Substitution and Fixed Variable cost study methodologies used to determine class cost of service by Champion International. The assumptions underlying those costing methodologies are misplaced, as found above. Therefore, appropriate cost information on which to base class revenue allocations are not provided by the CFS and Fixed-Variable methods. The proposed allocations under those methodologies are appropriate for adoption only if the Commission adopts one of Champion's cost studies. Adoption of such studies would represent a significant departure from Commission precedent for allocating revenue requirements to classes. Eisdorfer's proposed class revenue allocations, based on cost studies performed by Champion witness Kalcic, should be rejected.

294. Within the commercial and industrial class increase of 8.1% initially proposed by NSP, the Peak-Controlled customers as a group would receive a 10.9% increase, and the Energy-Controlled group an 11.1% increase. These rates result from an increase in the demand charge without an increase in interruptible discounts. Metalcasters of Minnesota (MCM) proposes that interruptible customers receive no more than the average increase, and perhaps less, since by MCM's cost of service analysis, such customers are currently paying too much. Resolution of this proposition rests on whether the PUC decides that interruptible service should be priced strictly on an embedded cost of service basis, rather than on "value of service". If the PUC decides on such pricing based on cost of service, then it would be appropriate to limit the increase to interruptible service customers to a level of the average for the entire commercial and industrial class.

295. NSP's proposed class revenue

allocations are just and reasonable and should be adopted. Upon application of the Administrative Law Judge's overall revenue deficiency recommendation of \$59,634,000 to NSP's revenue allocation, the following breakdown of gross percentage revenue increases by classes results:

Recommended	NSP's	ALJ's
	Initial	
	Filing	%
Increase		
Residential	8.1%	4.9%
Commercial and Industrial	8.1%	4.9%
Public Street and Highway Lighting	2.3%	1.4%
Other Sales to Public Authorities	8.3%	5.0%
Overall	8.1%	4.9%

The percentage increases recommended by the Administrative Law Judge were derived by dividing \$59,634,000 (the Judge's recommended additional revenue requirement) by \$98,198,000 (NSP's original requested additional revenue requirement). The result, 60.7%, was multiplied by each percentage figure in NSP's initial filing.

Residential Rate Design

296. The Company proposes changes in the residential rate design with respect to taking steps toward the phaseout of the Conservation Rate Break (CRB) by reducing the credit from \$3.50 to \$2.50 for customers who use 300 kWh or less per month, and from \$1.75 to \$1.25 for customers who use from 301 kWh to 400 kWh. It also proposes that the Winter End Step be eliminated, except for electric space-heating customers. For those customers, the Company proposes that the Step amount be increased to a 1¢ differential per kWh from its current differential of .23¢ per kWh.

Winter End Step

297. NSP's present rate structure includes a declining block rate, during the winter months, for NSP's residential customers who consume more than 1,000 kWh per month. Current rates also provide a discount of .23¢ for each kWh used in excess of 1,000 kWh per month.

NSP proposes that the existing declining block structure in the winter end-step rate be phased out in favor of flat rates for all non-space heating customers, while increasing the discount from 23¢ per kWh to 1¢ per kWh for customers who rely on electricity for space heating.

The OAG, DPS, Minnesota Senior Federation ("MSF", "Seniors") and NSP all agree that it would be appropriate to eliminate the winter end-step declining block rate for non-space heating customers and adopt a flat rate based on usage.

298. The DPS and OAG do not believe it is appropriate to retain a discount for customers relying on electricity for space heating. These two Intervenors agree that NSP should alter its current winter space-heating rate as follows:

1. Require flat energy charges in the summer and winter, with the summer rate equal to the summer rate for other Residential customers;
2. Increase customer charges to \$5.00 for overhead service and \$7.00 for underground service;
3. Space-heating customers would have a lower flat energy rate in the winter than non-space heating customers;
4. The space-heating customers would have a \$5.00 customer charge compared with \$4.50 for non-space heating customers;
5. The same Conservation Rate Break (CRB) credit, if retained by the PUC, would apply to both space heating and non-space heating customers; and
6. In order to qualify for the lower energy rate in the winter, space heating customers would have to have verified their primary use of electricity for space heating purposes.

299. NSP, while supporting its proposal to allow a 1¢ per kWh discount in the winter end step for space-heating customers using over 1000 kWh per month, agreed that the DPS/OAG proposal was reasonable, in that it addresses the billing impact and equity concerns raised by NSP, and was workable as well. That is due to the lower flat rate in winter for customers with electric space heating.

300. NSP witness Zins supports not simply retention of the current differential of .23¢ per kWh but an increase to 1¢ per kWh for space heating customers because billing impacts on space heating customers are substantial without such discounts. The DPS/OAG proposal, with its lower winter flat rate, substantially alleviates the billing impact concern. It is an appropriate goal for the PUC to eliminate declining block rates, which send an improper price signal (that each incremental increase in energy usage is cheaper). That signal contradicts the goals of energy conservation. In fact, flat rates better reflect NSP's incremental costs.

301. The proposed flat rate moderates the increase in bills for space heating customers through a reduced energy rate. It also shifts more of the customer costs to the customer charge and out of the energy rate by increasing the customer charge to space heating customers by 50¢ per month. These adjustments accomplish all the goals of the former declining block and discount for space heating customers without the problems associated by retaining a declining block rate.

302. It is appropriate to adopt the DPS/OAG proposal to eliminate the winter end step declining block rate and discount and replace it with a flat rate and an additional flat space-heating rate containing a lower energy charge in the winter, a \$5.00 customer charge and verification of space-heating use.

To the extent NSP is granted a lower increase than requested, energy rates should be adjusted downward in a fashion so as to retain the same proportion of revenue to be recovered from space heating and non-space heating customers.

The Conservation Rate Break (CRB)

303. The burden of proof to effect a change in the status quo in existing rates is on the party proposing the change. Minn. Stat. § VXEG, Q UH 0LQQHVRWD 3XEOLF 8WL0LWLHV Commission, 365 N.W.2d 341 (Minn. App. 1985). The CRB has been in existence since 1978 (Docket GR-77-611). NSP and the DPS are proposing a course which would result in the elimination of this residential rate design feature. The burden is theirs to prove that the feature is not reasonable and is not meeting the intent of the Public Utilities Commission. They have not met that burden of proof.

304. NSP has proposed the elimination of the CRB because it believes the Break is not effective in meeting its goals of promoting energy conservation. In support of its argument, NSP provided the results of a telephone survey which indicated that most customers who had received the credit (which applies against the customer charge) were not aware of what the credit was, did not realize they had received the credit, or had made no attempts to decrease electricity use to qualify for the credit.

305. NSP maintains that the deciding factor in whether or not customers receive the CRB credit is linked to reasons other than customers' efforts to conserve energy. For example, most customers who receive the credit live in apartment buildings and have few major electric appliances directly connected to their apartment. Therefore, while the apartment dweller may, for instance, use the same amount of energy to wash clothes as would a house dweller, the clothes washers and dryers are shared among tenants and located in common areas, allowing the apartment dweller to qualify for the CRB.

306. The Department of Public Service agrees with NSP that the survey results indicate that the CRB is not meeting the goal of promoting conservation in an effective manner. The DPS argues that the Break operates more as a wealth transfer among customers for reasons other than energy conservation than it operates to meet the goal of promoting energy conservation. The Department argues that the best conservation projects are those leading to conservation efforts that benefit all ratepayers. Projects should, at a minimum, promote a response to conserve energy at sufficient levels to produce adequate benefits to offset costs.

307. The Office of the Attorney General opposes elimination or reduction of the Conservation Rate Break. It believes that NSP's conclusions that the CRB has not produced the hoped-for conservation and that the CRB rewards persons who have lower electric levels for reasons other than conservation are wrong. It disputes NSP's interpretation of its telephone survey study as "flawed" and argues that low-energy lifestyles should be rewarded. The OAG maintains that NSP ignores the other reason for the creation of the Break in 1977 - to lower bills for essential electric services, i.e., a "lifeline" effect.

As support for its lifeline argument, the OAG notes that at page 4 of its Order After Reconsideration in Docket E-002/GR-77-611, the Commission stated that the purpose of the CRB was "to develop residential rates which will encourage conservation and maintain reasonably low rates for essential uses of electricity . . ."

308. The OAG asserts that lifestyles represent choices, including choices about energy use. It argues that NSP's study actually confirms that the CRB leads to more efficient use of resources. The study recognizes that conservation measures have been taken in about one quarter of the households surveyed, such as turning off unnecessary lights, reducing the use of air-conditioning and turning off other appliances when not in use. The study shows further that most CRB recipients (89%) do not have a second refrigerator and in general use fewer electrical appliances than non-CRB recipients.

309. In NSP's 1985 rate case, the Commission endorsed the notion that customers should be sent a signal to reduce consumption. In its Order at pp. 76-77 in Docket E-002/GR-85-558, the Commission stated:

"Customers should be encouraged to conserve electric energy . . . the Commission believes that it is fair to give customers the opportunity to reduce their energy bills by reducing consumption."

310. The OAG argues that a price signal to conserve exists in the CRB. It maintains that the signal sent to residential ratepayers is one to encourage them to conserve whether they have ever heard of the credit or not. The amplified price signal provides greater economic incentive to ratepayers to reflect on and to adjust their pattern of use than would exist in the absence of the Conservation Rate Break.

311. It is appropriate that the Commission should take into account the special needs of the poor for affordable rates. In addition, the OAG argues that NSP's study demonstrates that the CRB is effective in assisting low-income consumers. As the study concludes:

A relatively high frequency of low income households qualify for the CRB at least once a year. The study found that only 22% of low income households never qualify for

the CRB credit in a twelve-month period. 45% qualified 10-12 months of the year.

It is clear that a large percentage of low-income customers (approximately 78%) are receiving a benefit from the CRB.

312. The OAG also argues that while it is true that significant numbers of non-poor persons also receive the CRB, that result is nothing more than a reflection of the other purpose of the Break - an attempt to provide rewards for energy conservation.

313. Adoption of NSP's proposal will impose a dramatic rate increase on low-use and low-income consumers and will blunt the impact of any conservation reward. Customers using 100 kWh per month would face a 22.2% increase under NSP's proposal and customers using 250 kWh would see a 14.6% increase in their bills. Such immoderate and unwarranted increases, compared with the approximately eight percent increase faced by other residential customers under NSP's initially-filed rate proposals, constitute a "rate shock" that rate designs should avoid. In this connection, it is noted that the Administrative Law Judge has recommended a 4.9% rate increase for the Residential class.

314. The DPS claims that the CRB program costs residential customers \$11 million annually, resulting in higher rates. NSP states the \$11.5 million could be spent on cost effective programs. The Administrative Law Judge agrees with the OAG's criticism of these arguments -- they are misleading. It costs no more to have the CRB than not to have it. If the CRB were totally eliminated, there would be no decrease in NSP's revenue request and the \$11.5 million would still be collected from the residential class. However, it would then be collected from persons who formerly received the CRB, many of whom have low incomes. In fact, it would be collected from people who are now using the least electrical energy.

It is important to remember that the revenue shifted through operation of the CRB must be collected from the residential customer class anyway in order for NSP to raise sufficient funds to finance the provision of electric services. It is noted that NSP admits 20% of present CRB credits go to low-income customers, whereas only 14% of the Company's customers are low income. Therefore, low income customers are more than fairly represented as recipients of the CRB than those who are not poor.

315. The Judge agrees with OAG witness McIntire that the 1987 study performed by NSP has had its results interpreted by the Company in a fashion that skews its results. The Company advocates that the CRB is a failure unless any conservation rewarded by the CRB is also directly and specifically identified with the CRB by the customer. NSP stresses responses by customers who could not relate directly their conservation actions to an intended receipt of the CRB or who could not identify the CRB by name, not whether the CRB in fact rewarded persons who conserved or whether conservation was in fact

practiced by persons who received it.

To give the study credence, the data must be interpreted in a manner more broadly than simply identification of actions taken purely to qualify for the CRB, and must not exclude actions taken for conservation's own sake or in order to lower the customer's electric bill that have not been identified directly by that customer as being done to obtain the CRB. The bias inherent in NSP's interpretation is that anything less than a one-to-one direct, specific relationship between conservation actions and intent to receive the CRB meant the CRB was a failure.

316. Receipt of the Conservation Rate Break is as much a reward for persons who already were conserving before the CRB was enacted and have continued to do so in equal measure as it is a reward to those who do so specifically because of the CRB. To attempt to divine "real" reasons for why people conserve energy is immaterial to the issue of whether the CRB should be lowered or retained.

317. The DPS and NSP allege that many CRB recipients do not lead low energy lifestyles because they are likely not to be home during the day and may be using energy somewhere else. Such facts are immaterial in the judging of this rate design program, which is intended to help persons in the residential class based on how effectively they hold down energy consumption in their homes. Whether the same persons practice conservation in non-residential settings is immaterial. The CRB was not intended or designed to control energy consumption as a matter of personal lifestyle choices outside the residential setting.

318. The 1987 study on which the arguments of the DPS and NSP are based was flawed. While evaluating the effectiveness of the CRB is a legitimate goal, it should be done with criteria selected by the Commission, not by NSP.

319. It is appropriate to reject NSP's proposal to reduce and/or phase out the Conservation Rate Break in this proceeding.

Inverted Rate Proposal of the Minnesota Senior Federation (MSF)

320. The Seniors propose the adoption of an Inverted Rate schedule. Adoption of Inverted Rates results in a large but unquantified impact on some residential customers. The extent of "rate shock" under such a scenario is unknown because the record does not contain calculations of the dollar effect of implementing the proposed Inverted Rate at various usage levels. Inverted Rates are ascending rates such that rates increase on a per kWh basis as usage increases. The Seniors argue that under the current rate structure, larger residential users fail to pay the proportionately higher costs which the Seniors believe is associated with greater monthly use.

321. The Seniors contend that increased monthly consumption requires NSP to operate more expensive peaking plants. They contend further that increased monthly consumption is the

principal cause of burned-out transformers. Therefore, they believe it is reasonable to price higher monthly consumption at higher rates to reflect the costs such consumers put on the system.

322. The record supports the continuation of a flat rate structure because flat rates appropriately reflect the costs residential customers impose. Customers who consume more pay more under a flat rate structure. All residential customers pay for the energy and demand costs they impose on the system.

The Seniors' proposal ignores the element of time. That is, the record shows that consumers who consume at high monthly levels do not necessarily consume relatively more energy at peak periods. This fact is significant because NSP's costs per kWh vary by season and by time of day, not by the amount an individual customer uses.

323. Evidence introduced by MSF representative Scott through DPS witness O'Connell supports a flat rate structure because it indicates that customers who consume at different levels over the course of a month use relatively the same amount during NSP's more expensive production periods. Data introduced in an attempt to assess daily patterns of residential customer energy use show that, on a per kWh basis, residential customers at different usage levels impose similar costs. The Residential Class tends to peak at the same time.

324. The fact that some high energy consumers may use air conditioners is irrelevant to rate analysis as long as the rates reflect any increased costs associated with increased use. Flat residential rates reasonably account for such increased costs as they relate to increased use.

325. The MSF proposal for Inverted Rates is inappropriate for adoption in this proceeding.

Other Residential Rate Proposals

326. The specific changes to the residential Time-of-Day (TOD) rate proposed by NSP is unopposed by any party and should be adopted.

327. Adjustments to the customer and energy charges in the Energy Controlled Service rate were unopposed by any party and should be adopted.

328. The Company's proposal to adjust the customer and energy charges in the Limited Off-Peak Service rate were unopposed by any party and should be adopted.

Small General Service and Small General Service Time-of-Day (TOD) Rates

329. NSP proposed no change in the Small General Service rate.

The customer charge remains \$6.60, and the energy charge is equal to the residential rate. The Small General Service TOD rate was developed by de-averaging the standard rate using marginal energy cost as a reference point, and adding incremental metering costs to the customer charge. The proposals for these rates were unopposed and are appropriate for adoption.

GENERAL SERVICE (COMMERCIAL AND INDUSTRIAL) RATE ISSUES

330. NSP proposed several refinements to the General Service rate, but no structural changes. The refinements include the updating of voltage discounts to reflect current costs, a "Split Service" provision to allow a customer's thermal storage equipment to be put on a TOD rate while the remainder of the service remains on the standard rate, and the revision of the billing demand limiter to take effect at a 10% load factor instead of a seven percent load factor.

NSP proposed that both the demand and energy charges be increased for this class, with a greater increase in the energy charge in an effort to equalize the rate of return being earned from the small and large members of the class. For the same reason, a small reduction was proposed for the customer charge.

Champion calls for equal increases in energy and demand charges, while Minnesota Energy Consumers (MEC) advocates an increase in the demand charges only. These Intervenor base their arguments on the contention that more fixed plant costs are demand related than NSP allocates, and this misallocation should be addressed by an increased demand charge. If the PUC were to adopt a Fixed/Variable approach to costing, then the Intervenor's proposals would be consistent with the cost of providing service. However, if the Commission continues to recognize that a significant portion of plant costs is more appropriately related to providing energy (as found in the stratification process in NSP's Embedded Cost Study), the proposals of Champion and MEC are inappropriate.

331. As noted above, the Administrative Law Judge found it is appropriate to recognize that a major portion of plant costs is related to providing energy. Therefore, it is inappropriate to adopt the positions of MEC and Champion advocating increases in the demand charges only for this class.

MEC argues that higher demand charges stimulate the conservation of demand. NSP replies that while this may be true, the attendant relatively lower energy charges reduce energy conservation. As noted by NSP, to elevate demand charges inappropriately sends incorrect economic price signals to customers, possibly causing uneconomic investments in equipment or changes in manufacturing processes or business procedures. MEC's proposal to elevate demand charges only for the Large General Service class should be rejected.

General Service Time-of-Day Rates

332. The Company proposes minor changes to the General Service Time-of-Day (TOD) rate that incorporates the changes proposed by the Company for the standard General Service rate. The Company argues that the General Service TOD rate should be made compatible with the final General Service rate.

333. The DPS proposes that TOD rates be made mandatory for all General Service customers with loads of 500 KW or greater. The Department argues that mandatory TOD rates would be more effective than voluntary TOD rates in encouraging customers to shift load from on-peak to off-peak periods.

334. TOD rates are an "unbundling" of averaged C & I General Service rates in an effort to reflect better the costs General Service customers impose on NSP's system. Those operating during peak periods impose greater costs and will therefore incur higher TOD rates for peak usage, while customers who operate during off-peak periods impose fewer costs and will pay lower TOD rates. The DPS maintains that customers who use relatively more energy during off-peak periods subsidize customers who use relatively more during peak times.

335. The Department argues that mandatory TOD rates make no requirement for customers to change their usage patterns, they rather provide incentives, through higher on-peak rates, to conserve energy during peak times or shift load to lower cost off-peak periods. To the extent customers respond to such incentives, the entire NSP system benefits by an overall reduction in peak and more efficient use of energy. The resultant load shifting and conservation is designed to result in a decrease of the system peak and a delay in the need to add more peaking capacity.

336. The DPS maintains required TOD rates are reasonable because the Company's largest C & I General Service customers use enough energy to justify any associated metering charges. For this reason, and also because the DPS advises moving conservatively with this proposed rate design change, only the largest customers are proposed for placement on mandatory TOD rates.

The DPS proposes to allow NSP nine months from the final Order in this case to implement required TOD rates, and that the PUC order NSP to submit a report within 90 days of the final Order describing how the Company plans to implement required TOD rates for large General Service customers.

337. NSP is opposed to the Department's TOD proposal. It argues that customer acceptance will be very difficult, that current voluntary TOD rates for C & I customers have been effective in encouraging customers to shift load to off-peak times and that mandatory TOD rate implementation will add to costs for administration.

The DPS acknowledges that there will be customer dissatisfaction on the part of those not currently paying their own way who will be forced to pay higher on-peak rates. The DPS

views this fact alone as insufficient to reject TOD rates. The Department argues that the effectiveness of NSP's current voluntary TOD program has not been demonstrated with respect to load shifting. As noted by MCM witness Craig Anderson, to date there has been only a 14 MW reduction in system load peak for the 1,087 voluntary TOD customers on NSP's system.

The Department also notes that since voluntary TOD rates were implemented by NSP approximately ten years ago, only customers who either operate largely off-peak or can do so easily have made the switch to TOD rates.

338. The DPS urges implementation of mandatory TOD rates to provide additional cost incentives necessary for shifting load or conserving on-peak demand which are absent from the voluntary program. Under the current rates, on-peak users still pay averaged rates that fail to reflect fully the costs imposed by usage during peak times. Raising the rates for such periods of time will provide additional economic incentives to shift load or to conserve during times of operation that coincide with system peak.

The Department urges rejection of NSP's claim that required TOD rates will add metering and up-front administrative costs. For example, it argues that metering costs of approximately \$47,000 per year noted by NSP would be offset by the \$6.00 per month customer charge applicable to TOD customers, 650 of which demand over 500 KW and would be affected by required TOD rates.

The DPS also challenges NSP's estimate that required TOD rates will increase expenses proportional to that which would be incurred in increasing marketing expenses if NSP were to market voluntary TOD programs to 650 customers. The DPS maintains this claim is illegitimate because requiring the TOD rate will obviate the need for promotional expenses.

339. The Metalcasters oppose required TOD rates for several reasons: that the interruptible discount is a more effective load management tool; required TOD rates will result in a windfall to NSP; and customers will experience unacceptable billing impacts.

The Department responds that TOD rates and interruptible discount issues serve different, although overlapping purposes. Interruptible discount levels, which are value-based discounts from firm service rates, affect how much interruptible load NSP will use along with other supplies to meet its peak demand. TOD rates deal with the issue of the appropriate rates customers should pay for the energy they use. They are cost-based firm service rates attempting to reflect more closely the costs customers impose on the system than is accomplished through standard ratemaking. As to effects on customers, firm customers pay for discounts to interruptible customers while interruptible customers do not necessarily pay higher rates because of required TOD rate imposition. Interruptible customers sign a contract agreeing to supply load, whereas TOD customers are under no obligation to change their behavior. While TOD customers can consume energy during periods of high cost to the system,

interruptible customers are obligated to provide interruptible load during such periods if called for in their contracts. Because of these differences, the DPS maintains that the TOD and interruptible programs cannot be analyzed under the same criteria.

340. The DPS disputes MCM's claim that required TOD rates will result in a windfall to NSP because businesses cannot so readily change their usage patterns over a day. The record does not establish that required TOD rates will result in increased revenue for NSP. The rates, as proposed by the DPS, are designed to allow NSP to collect the same revenue as under standard averaged rates -- they are set as if no customers will alter their usage patterns. The Department argues that NSP will realize increased revenues only in the unlikely event customers decide to move from off-peak to on-peak use or if on-peak customers significantly increase their on-peak usages. It maintains such scenarios are highly unlikely.

341. As to concern over dramatic billing impacts, the Department estimates monthly billing impacts foreseen by NSP and MCM will not occur in reality because customers will make conservation efforts and move additional load to off-peak periods.

The Department estimates that billing impacts will range from a 4.78% decrease for ratepayers on transmission transformed voltage with 20% on-peak load to increases in the range of 5.37 to 6.37% for ratepayers with 80% peak load. While customers may view such impacts as significant, the DPS does not believe they are unreasonable, particularly when viewed from the perspective of other C & I ratepayers who pay more for their costs of service. The DPS maintains the fact that there are billing impacts shows that large customers with significant on-peak usage are not paying the full costs associated with their use under current flat rates, while other firm C & I customers subsidize these large customers through higher General Service rates.

342. NSP's opposition to mandatory TOD rates centers around arguments that the current program of voluntary rates is meeting with success, a mandatory program would involve additional metering costs (about \$47,000 per year) and up-front administrative costs of about \$315,000, that benefits would not be immediate or certain, and many customers would not readily accept a mandatory program. The Company urges the Administrative Law Judge to recommend as he did on this issue in the Company's last rate case (GR-89-865).

In the last rate case, the Judge was persuaded that because of problems of customer acceptability and adverse billing impacts, it would be inappropriate to adopt the DPS recommendation. However, the Department's recommendation in the last case was for the mandatory imposition of TOD rates on all customers with loads of 100 KW or greater. In this case, the proposal is more conservative in terms of administration and the imposition on NSP of up-front costs. The potential customer base is much smaller (650), and each of those customers has a large load (over 500

KW).

Many possible problems are eliminated by focusing on the smaller, yet greater load-using group, which presumably represents businesses or other operations that already are sophisticated with respect to the management of electric load. The Administrative Law Judge concludes that the DPS has demonstrated that the potential for a more equitable distribution of cost sharing within the Commercial and Industrial class possibly realized by the imposition of mandatory TOD rates outweighs billing impacts on the part of customers who are being "subsidized", administrative inconveniences and problems with customer acceptance. Up-front administrative costs can be expensed and recovery sought in a miscellaneous filing.

343. The DPS proposal for imposing mandatory TOD rates on the largest commercial and industrial customers should be adopted.

344. The DPS urges rejection of NSP's Split-Service proposal because it maintains required TOD rates are superior since Split-Service is a type of voluntary TOD proposal that only applies to a few customers.

NSP seeks to allow customers to "split" their electric service so as to pay the flat General Service rate for all but their thermal storage energy use, which would be billed under TOD rates. NSP argues this proposal encourages customers to place additional loads on TOD rates and that the lower off-peak rates for thermal storage use under TOD rates encourage larger customers to invest in thermal storage equipment and take off-peak service for heating and cooling needs.

345. Although the Company's proposed voluntary Split-Service proposal may affect very few customers and induce few changes in consumption patterns, as the Department argues, the Administrative Law Judge is persuaded that there are positive benefits to the program which, if not obviated by the imposition of mandatory TOD rates, are appropriate for adoption.

It is appropriate to adopt NSP's Split-Service provision proposal. The DPS proposal to reject Split-Service because of adoption of the Department's proposal for mandatory General Service TOD rates is inappropriate because that proposal would fail to capture any customers who are not large enough to be compelled to shift to TOD rates but still wish to take advantage of the benefits of the Split-Service program.

Competitive Service Rider

346. NSP proposes a Competitive Service Rider (CSR) consistent with Minn. Stat. 216B.162, applicable to C & I customers with loads of 500 KW or more where "effective competition" exists. "Effective competition" means a market situation in which an electric utility serves a customer in its service area that has the ability to obtain its energy

requirements from an energy supplier not regulated by the Commission. NSP's proposal was supported by the DPS and not opposed by any party.

DPS proposes modifications in the Rider, as follows: it must include a description of the "minimum annual charge" (an explicit statement that the purpose of the annual minimum charge is to recover distribution costs) and it must require that NSP perform an energy audit for each customer that takes service under the CSR. NSP opposes these modifications, arguing that the first proposal unnecessarily restricts the flexibility of the Rider and that the second may result in unnecessary or unwanted audits in certain cases.

The DPS maintains that an explicit stating of the purpose of the Rider assures that NSP will apply the same criteria to each customer when determining the minimum annual charge. Such a requirement will ease administration of the Rider on the part of the PUC because it assures the same criteria are used to determine whether or not to approve an individual CSR. Mandatory audits are urged by the DPS so that NSP can identify ways of using energy more efficiently with respect to the customers on the Rider. The DPS proposes allowing NSP to determine the scope of the audits, which may be recovered through the CIP Tracker account.

347. Since the recovery of distribution costs is the only purpose of the minimum charge in the Rider (DPS Exhibit 172, Sch. CO-10), and because Minn. Stat. 216B.162, subd. 8 allows the PUC to require a utility to provide a CSR customer with "an energy audit and assist in implementing cost-effective energy efficiency improvements to assure that the customer's use of electricity is efficient", the proposals of the DPS to modify NSP's proposed CSR are found to be reasonable, appropriate and should be adopted.

Interruptible Service

348. NSP proposes no design changes to the Peak Controlled TOD or Energy Controlled Service rates but adjusted the customer demand and energy charges to reflect current costs and to reflect the same changes proposed for the corresponding firm service rates. The demand charge discounts were maintained at their current levels. The DPS supports the interruptible rates proposed by NSP.

349. The Company proposes increasing the customer charge for interruptible customers by \$11.90 for Peak Controlled customers and \$12.90 for Energy Controlled customers to reflect the higher costs associated with serving such customers.

The current Peak Controlled demand discount is \$2.91 per KW per month and the Energy Controlled discount is \$3.10 per KW. An increase in the discounts would likely increase NSP's interruptible supply, but the DPS believes there has been no showing that the present amount of interruptible supply is inadequate. Therefore, the Department supports NSP's request to

retain the current discount levels.

350. North Star, Champion and the Metalcasters argue that the level of NSP's Interruptible Service rates should be based on a measure of cost of service, as are firm service rates. Each presented forms of embedded cost of service and/or marginal cost of service data to support their claims that NSP's proposed demand charge discounts are too low.

NSP introduced testimony showing that determining the appropriate level of interruptible credits is most appropriately based on value of service considerations. NSP maintains the interruptible credit just high enough to attract sufficient interruptible load. If customers stopped signing up for the rate or began to move back to firm service, then an increase in the credit may be appropriate.

351. North Star proposes a Large Interruptible Service rate for customers with at least 5 MW of interruptible load that can be interrupted with ten minutes' notice. Interruptions under this rate would be limited to times when system capacity constraints impair or endanger the reliability of NSP's system. The demand charge credit would be \$5.12 rather than the \$2.91 in the current Peak Controlled rate.

NSP and the DPS introduced evidence to show that the proposed LIS rate would not be as valuable on the NSP system as argued by North Star. NSP's existing interruptible rates allow the Company to interrupt without notice if necessary and do not limit interruptions to system emergencies. They maintain it would unnecessarily increase rates for firm service customers, and a risk would be created of oversubscribing of the rate if North Star's LIS proposal is adopted.

352. North Star and the Metalcasters oppose inclusion of winter capacity-related costs to Peak Controlled interruptible customers. North Star witness Goins criticizes the Company's Embedded Cost Study on the basis that it overstates the generation and transmission (G & T) costs imposed by interruptible customers. The study allocates G & T capacity costs based on classes' projected contributions to NSP's winter and summer coincident peaks.

NSP argues that only Energy Controlled interruptible customers should be exempt from both winter and summer capacity charges because only those customers can reasonably expect to be interrupted during both seasons. Because Energy Controlled customers may be interrupted when NSP nears a peak as well as when it must burn oil or purchase equivalent-priced fuel from other supply sources, those customers are most likely to be interrupted during NSP's peak winter period. However, Peak Controlled customers can be interrupted only at peak periods or in the event of a system emergency. Therefore, Peak Controlled customers are generally subject to fewer hours of interruption and do not realistically face winter interruptions because NSP does not reach its full peaking capacity in the winter. There is no record of Peak Controlled customers ever being interrupted

during the winter.

353. The critical issue in allocating cost is whether interruptible loads of Peak Controlled customers release an equivalent amount of capacity for sale or exchange during the winter. That is, can NSP's planners count on these loads being off-line when they estimate the amount of marketable capacity? The evidence suggests that planners, in fact, treat Peak Controlled customers as firm customers in the winter. Because Peak Controlled customers do not contribute to capacity during the winter through interruption, it is more appropriate to assign them winter capacity costs than to assign them no capacity costs at all.

354. North Star and MCM allege NSP discriminates against interruptible customers by not setting discounts at higher levels. North Star claims the discounts should be priced at NSP's avoided capacity costs -- those associated with building a combustion turbine. The discrimination claim is misplaced. The Company does not discriminate unreasonably against interruptible customers by setting peak and energy interruptible discounts at levels less than the maximum avoided cost of a combustion turbine because interruptible load is not the same as a combustion turbine. Factors such as lower available hours and duration of access to the source of supply mean NSP cannot rely on interruptible load to the same extent as it can a combustion turbine.

It is not discriminatory to use value of service pricing rather than cost of service to set the discount. Interruptible service consists of firm service provided by NSP at cost-based General Service rates, and a specific amount of load that the customer agrees to provide to NSP through interruption of firm service that is priced at a discount from General Service rates. In deciding whether to sell some of their load back to NSP, interruptible customers consider whether the value of NSP's discount offsets their costs in supplying the load.

355. Firm C & I customers finance the interruptible discounts through paying higher General Service rates. Every 10% increase in the interruptible discounts costs Firm General Service customers approximately \$415,000 at current interruptible levels.

356. It is appropriate for NSP, which should minimize its costs to any extent possible, to price its interruptible discounts just high enough to attract sufficient customers to meet its supply needs. Proper discount pricing requires value of service considerations. If firm General Service customers believe that the discounts are too low, they will not agree to become interruptible customers. If the discounts are set too high, they may attract more interruptible load than NSP needs to meet its peak and energy related demands. The result is that General Service customers who cannot risk interruption would be subsidizing unnecessary interruptible supply on the system.

357. The DPS argues that cost of service does play a part

in pricing interruptible discounts because cost of service considerations define the maximum limits of such discounts. The discounts should not be priced higher than NSP's long-run avoided costs of a combustion turbine, and interruptible customers should pay at least the costs they impose on the system (distribution, transmission and generation).

358. Under certain circumstances, the value to a customer of selling load back to NSP in the form of interruptible service may be equivalent to NSP's costs. The fewer restrictions placed on NSP's ability to interrupt, the closer interruptible load comes to traditional supply sources such as a combustion turbine.

Unlimited numbers of interruptions for unlimited durations of time, as well as strictly limited "buy through" provisions (where interruptible customers can buy electricity from NSP during an interruption at higher prices) would render interruptible supplies significantly more comparable to a combustion turbine in terms of both availability and reliability. The discount level would have to be very high in such situations in order to attract Firm General Service customers to sell interruptible load. Such values may well equal NSP's avoided cost of a combustion turbine.

359. Current interruptible contracts do not contain unlimited interruptible terms. In order to attract sufficient interruptible loads, the Company has negotiated Peak Controlled contracts requiring no more than 80 hours of annual interruption, many of which contain other limitations as well.

360. North Star argues that if the PUC rejects its proposal to eliminate the allocation of winter capacity-related costs to Peak Controlled customers, then it should amend tariff language so that North Star could be interrupted only in the summer. NSP and the DPS argue that no such change is necessary because it does not significantly alter the status quo for NSP or any of its interruptible customers on Peak Controlled rates. The Administrative Law Judge agrees with NSP and the DPS on this issue.

361. The Metalcasters oppose NSP's increased customer charges in interruptible rates on the grounds they effectively decrease the overall value of the interruptible discount. It recommends the Commission commit to preserving the present value of the interruptible discounts by ordering that the Peak Controlled rate be set at 44% of the firm service demand charge and the Energy Controlled rate at 47%.

The DPS opposes establishment of predetermined interruptible discount levels as being contrary to value of service pricing. If interruptible discounts are inadequate, new customers will refuse to become interruptible customers and present interruptible customers will revert to firm service. In fact, NSP reports that approximately 40 new customers per month agree to become interruptible and supply load to it.

The Metalcasters' proposal of a predetermined interruptible discount level is unreasonable, contrary to the value of service

pricing and should be rejected.

362. Holding the discount level at its present position encourages present interruptible customers to honor the terms of ongoing contracts. These customers agreed to sign five-year interruptible contracts with the knowledge that changes in non-utility costs as well as utility costs other than the discount level might occur during that time. The only guarantee was that the interruptible discount amount would remain constant. These customers should be held to the benefit of their original bargain, the DPS and NSP maintain. Similarly, if non-utility costs decrease, NSP will not have grounds to complain that the discount levels should also decrease during the time period set by contract.

363. The DPS maintains interruptible discounts should not be raised before it becomes clear that increased interruptible supply is needed. No party has shown that NSP's current level of interruptible supply is inadequate. Since other firm service customers pay for increased supply, a showing of need should be required before an allowance of an increase in interruptible discount prices.

Another consideration for NSP and the DPS is that, should the Commission adopt the DPS's proposal requiring time-of-day rates for NSP's largest customers, the level of response to TOD economic incentives could change NSP's peak characteristics. The shifting of load to off-peak times or the undertaking of conservation during peak periods could result in a future change in NSP's interruptible needs. Allowing the discount for interruptible service to increase without a showing that more interruptible supply is necessary could bind NSP with excessive interruptible supplies for as long as five years. And, if a need exists for an immediate increase, then NSP can apply to raise the discount levels in the course of a miscellaneous filing.

North Star argues in reply that NSP needs more interruptible supply now, to avoid as long as possible construction of a combustion turbine peaking plant now foreseen for 1994. And, what interruptible load avoids is the cost of building such a plant. The Metalcasters endorse these arguments, stressing the need to avoid plant construction by raising the discount now.

364. It is appropriate to continue NSP's interruptible discount levels of \$2.91 per kW for Peak Controlled service and \$3.10 per kW for Energy Controlled service during the test year.

365. North Star proposes a new tariff, called "Large Interruptible Service/Energy Controlled" (LIS/EC), which would apply to customers with at least 5 MW of interruptible load. There are only four such customers, two of which are North Star accounts. These customers would receive a discount of \$5.12 per billing kW and be obligated to various altered interruption terms. The terms include permitting interruptions within ten minutes advance notice under certain conditions, requiring an initial five-year contract, limiting interruptions to no more

than 150 hours per year, paying a significant penalty for failing to interrupt, and establishing an interruption priority such that LIS/EC customers would be interrupted first, before other interruptible customers.

NSP maintains that the only terms in the proposed LIS/EC tariff that are more strict than existing rates are an 18-month notice for returning to firm service and the "priority of interrupt" feature. The current Energy Controlled rate has no limits on interruptions. As to the proposed minimum interruption notice of ten minutes, the current rate has no minimum notice period. NSP argues that the larger discount would be of great advantage to North Star and of little or no extra value to NSP.

The DPS maintains that although North Star has raised some important issues with respect to interruptible service, its new tariff proposal is not sufficiently developed to ascertain its reasonableness. The DPS believes it is unclear whether the new tariff would increase NSP's interruptible supply or make the supply more available. It notes further that the record fails to show that current levels of interruptible supply are inadequate. The Department believes it logical that in exchange for such a large discount, a LIS/EC customer should be subject to fewer restrictions on interruptions. However, Dr. Goins's proposal includes new interruption restrictions such as that on the duration of any one interruption and the total number of interruptions per year. It believes that the limitations of the proposal, including the ten-minute notice priority interruption, may in fact make the interruptible load less available for interruption than is provided in current tariffs.

366. It is appropriate to reject North Star Steel's proposed LIS/EC interruptible tariff.

367. The DPS recommends that the PUC order NSP to file a report exploring different interruptible options, such as establishing a priority schedule with respect to the interruption of different customer groups, within 60 days of the final Order in this case, and that interested parties be allowed to comment on NSP's filing. It is appropriate to provide for such a report and comment schedule in the Commission's final Order.

368. NSP argues that if the PUC determines that it wants to reduce the impact of a rate increase on interruptible customers, or decides that it wants to increase the interruptible discount at this time to attract additional interruptible loads at a faster pace, then the rate design proposals of Champion International, with minor modifications, would be a reasonable and moderate alteration of current rates. Champion proposes that as to General Service and Interruptible rates:

1. The Commission should order equalization of revenue increases derived from the demand and energy charges.
2. The PUC should increase the seasonal demand charge differential from \$2.25 per kW to \$2.50 per kW.

3. It should create a tariff bloc for the first 50 kW of demand by general service customers. The charge for this block would be 16¢ per kW less than that for all firm demand in excess of 50 kW.
4. The Commission should increase the current credit for controllable demand (relative to firm) in the Peak-Controlled service tariff by 29¢ per kW per month.
5. The demand voltage discount for transmission service should be increased from \$1.80 per kW to \$2.05 per kW. Also, the Commission should maintain the current energy voltage discount for transmission service at 14¢ per kWh.

369. With respect to interruptible rates, the most significant feature of the champion proposal is a 29¢ (10%) increase in the interruptible discount for Peak-Controlled service. NSP maintains that, while an increase is not absolutely necessary at this time, the 29¢ proposal would be acceptable to NSP as a moderate way to increase customer satisfaction with the interruptible rate and to increase its attractiveness to additional customers. NSP will accept the credit increase only if the seasonal demand charge differential is concurrently increased to \$2.50 per kW (this is Champion's second proposal) in order to transfer more of the increased annual credit into the summer season. In addition, the credit increase should be less than 29¢ to the extent that the overall rate increase is less than the 8.1% originally requested by NSP.¹ NSP also maintains that if the Peak Controlled discount is increased, it makes sense to increase the Energy Controlled discount by about the same amount.

¹If the Commission accepts the Administrative Law Judge's recommended overall revenue requirement increase, and it agrees with NSP on this issue, NSP would be allowed to increase the credit by approximately 18¢.

370. If the PUC desires to increase the attractiveness of interruptible rates to new loads or believes it is appropriate to ameliorate the billing impact of rate increases for current interruptible customers, the Champion proposal regarding interruptible rate discounts, as modified by NSP's proposal to also increase the discount to Energy Controlled interruptible customers by the same amount, represents a reasonable and moderate methodology to achieve those goals. It is appropriate for adoption if an increase in interruptible discounts is ordered.

LIGHTING SERVICE

371. The Company proposes an increase in the lighting class

of 2.3% to be distributed on the basis of a detailed cost analysis of the several components of the service. It also proposes to modify the names in the lighting service rate schedule and to add a "Major Roadway Maintenance Surcharge" of \$1.25 per luminaire per month.

The DPS proposes that lighting maintenance service be deregulated because a competitive market exists for those services.

372. The DPS notes that NSP's data indicate most street lights are owned by customers. The proposed new "Major Roadway Maintenance Surcharge" accounts for 62% of the increase to customer-owned lighting, and explains major differences in NSP's proposed increases for Company-owned versus customer-owned lighting.

The DPS argues that a rejection of the surcharge as an unnecessary regulation of a competitive service is appropriate and consistent with the PUC's May 29, 1989 Order in Docket E-002/M-88-677, in which the Commission determined that repair and maintenance of customer-owned street lighting is a competitive service.

373. It is appropriate to reject NSP's proposed surcharge for Major Roadway Maintenance.

374. The DPS proposes that the PUC order all maintenance service for customer-owned equipment to be deregulated to allow electric contractors to compete with NSP to provide the service. It argues that deregulation is appropriate in order to allow the market to set the prices for this service. It maintains there are sufficient numbers of electrical contractors in the service territory to provide maintenance service to meet national standards. NSP is free to propose reasonable standards such contractors must meet, in addition to standard electrical practices, to ensure NSP's ordinary safety standards. Proposals for such standards are appropriately reviewable by the PUC.

375. With respect to any service standards NSP may request, the DPS maintains it is appropriate to order the Company to submit within 60 days of the final Order in this case a list of standards NSP would require of electricians going beyond ordinary electrical service standards.

376. If it is ordered that all repair and maintenance service for customer-owned street lighting equipment be deregulated, the Department argues it would be appropriate to remove the cost of that maintenance service from the regulated portion of the Company. That removal would result in an adjustment of NSP's rates for customer-owned equipment. The DPS estimates that deregulation results in a \$1,086,000 decrease in revenues, or about six percent of NSP's proposed total requirement from lighting services.

The overall financial effect of the DPS proposal is believed by the DPS to be minor because both costs and revenues would

decrease on the regulated side of NSP's operations.

The DPS did not provide schedules showing the overall financial effect of implementation of the deregulation of lighting maintenance service, although its Rate Design witness, Ms. O'Connell, believes that the overall financial effect would be minor because both costs and revenues would decrease about the same amount on the regulated side of NSP's operations.

377. If deregulation is ordered for maintenance of customer-owned lighting, the DPS asserts it is appropriate to order NSP to file an allocation methodology reporting the cost separation, and to revise its rates in its compliance filing in this case to reflect the financial impact of deregulation of customer-owned lighting maintenance service.

378. It is appropriate to reject the DPS proposal to deregulate the provision of repair and maintenance services to customer-owned street lighting. The record is insufficient to analyze the effect on NSP's revenue requirement.

MUNICIPAL PUMPING SERVICE

379. The Company proposed no change in the pumping rate other than those required to maintain compatibility with General Service rates. NSP's proposal is found to be just and reasonable.

380. The Board of Water Commissioners of the City of St. Paul supports the proposal in NSP's original filing for a three-period Time-of-Day (TOD) rate. See Findings 26 in Part I. The JUDGE is unable to determine whether that proposal has been withdrawn by NSP. If it has, the Board's proposal should be reinstated for pumping services in order for municipalities to better manage their loads for such necessary functions.

MISCELLANEOUS RATES AND PROVISIONS

Service Charges

381. The Company proposes to maintain the Service Connection Charge at \$10.00. The Company also proposes two new service charges, a Service Reconnection Charge of \$25.00 and a Service Relock Charge of \$100.00. The costs associated with these activities are \$59.00 for reconnection and \$185.00 for relock.

The DPS argued that the billing impacts of these new service charges would be excessive and proposed that the Service Reconnection Charge be set at \$25.00 and the Service Relock Charge to be \$50.00.

382. It is appropriate to accept NSP's proposal to split its current Service Connection Charge into three separate services, as noted above, as well as to increase charges for

returned checks, trouble calls, service construction, automatic protective lighting and account histories. It is appropriate to set the Service Connection Charge at \$10.00.

383. Service Reconnection is NSP's proposed charge for reestablishment of service NSP has disconnected because customers have not paid their bills. A Service Relock Charge applies when customers tamper with locks NSP places on meters disconnected for non-payment of bills. This charge is meant to reflect NSP's costs of making collection calls, locking the meter and redisconnecting the service. In such cases, redisconnection must be accomplished by physically disabling the meter or disconnecting service at the pole.

384. The DPS argues that a 150% increase to the Service Reconnection charge contravenes the goal of getting customers back on service and paying their bills. It recommends a \$15.00 charge for that function.

The DPS agrees that customers who tamper with locks, causing NSP to relock the equipment, should pay a higher charge which reflects a penalty. However, it maintains a 900% increase in the charge is excessive (all service charges are now \$10.00). In addition, it argues that the likelihood NSP would collect \$100 from many such customers is small. To moderate the increase, yet still reflect the penalty for the higher cost, the DPS recommends a relock charge of \$50.00.

385. It is appropriate to reject NSP's proposed charges for Service Reconnection and Service Relock. The proposed charges of \$25.00 and \$100.00, respectively, are excessive changes that should be moderated.

The Department recommendation that the charge for service reconnection be set at \$15.00 is appropriate. Its proposal to set the service relock rate at \$50.00 is appropriate because it is high enough to reflect the intended penalty involved.

Other Charges

386. The Company proposes additional minor changes to several rate schedules and service provisions to reflect current costs which were unopposed by any party and not discussed above. These rate schedules and service provisions changes are for Direct Current Service, Nicollet Mall Service, Fire and Civil Defense Siren Service, Excess Energy-St. Anthony Falls Lock and Dam, Excess Footage Charges and Automatic Protective Lighting Service.

The Company also proposes one language change to its General Rules and Regulations which makes it clear that the Business Interruption provision applies to both the Annual Minimum Demand Charge and the Demand Ratchet.

The proposed changes to the above-listed rate schedules and service provisions are found to be just and reasonable. It is

appropriate to adopt them.

REMAINING ISSUES

Rate of Return Clarification

387. In arriving at his estimate of dividend growth of 4.8% for NSP, which growth is a component used in determining return on equity under the Discounted Cash Flow (DCF) method, the Administrative Law Judge weighed the recommendations of three expert witnesses. With respect to the recommendation of OAG Witness Marcus, whose determination was accorded equal weight to Dr. Thompson of the DPS and twice that of North Star Witness Solomon, a growth figure of 4.7% was used in the computation. In the Discussion on page 20 of Part I, it is explained that the 4.7% attributed to Marcus was arrived at by adding his derived growth figure of 4.6% and the ten basis points (0.1%) of upward adjustment made by Marcus to conform NSP's derived return on equity (ROE) with that of Marcus's comparison group, an adjustment Marcus considers insignificant (OAG Ex. 92, p. 26).

388. Upon review of Part I, it is noted that Dr. Marcus used a growth figure of 4.5%, not 4.6% in his determination of NSP's ROE. He chose that figure using the retained earnings method, which he believes is a more reasonable analysis to employ in evaluating NSP at this time, as compared to historical dividend growth (influenced by high payout ratios, which cannot be sustained over the investment time horizon) or analysts' forecasts (which he considers inconsistent with NSP's past performance as compared to that of the utility industry as a whole). See OAG Ex. 92, pp. 22-23. Adjusting the growth figure of 4.5 upward by ten basis points results in a growth component attributable to Marcus of 4.6%, not 4.7%.

389. The Administrative Law Judge arrived at his growth recommendation of 4.8% by calculating a weighted average of the recommendations of Solomon (4.07%), Marcus (4.7%) and Thompson (5.25%), according "double" weight to the figures of Marcus and Thompson and counting Solomon's figure only once. The result was a growth component figure of 4.8% ($4.07 + 4.70 + 4.70 + 5.25 + 5.25$, total divided by 5). A recalculation using the same methodology with a 4.60% (instead of 4.70%) amount for Dr. Marcus's figure results in a growth component of 4.75%.

390. If the Administrative Law Judge had adopted 4.75% as his growth component, his ROE recommendation would have been 11.85% instead of 11.90%, the overall rate of return recommendation would have been 9.92% instead of 9.94%, and the recommended gross revenue deficiency would have been \$58.86 million rather than \$59.634 million. Instead of recommending an overall general rate increase of 4.90%, the recommendation would have been 4.86%.

391. Although the Judge erred in his calculation of his growth component recommendation by using a slightly higher figure than that actually recommended by a particular expert witness, he declines to change his recommended growth component, recommended

return on equity, recommended overall rate of return or recommended gross revenue deficiency figures. It is generally acknowledged that the growth estimate is the most subjective component in rate of return DCF analysis, and the one for which the most judgment is required. The Administrative Law Judge has determined that staying at 4.80% rather than moving to 4.75% as a growth component is appropriate. First, the difference is not significant, with a revenue impact of \$748,000, approximately 6/100ths of one percent of test year revenues. In addition, the actual weighted average figures (4.794 using 4.70 for Marcus, 4.754 using 4.60) both round up to 4.8%, which establishes further that adjustment to reflect the corrected growth component for Dr. Marcus would be insignificant. Finally, the 4.8% growth component devalues slightly more (from 17.12% to 16.98% of the total, a downward adjustment of 8/10ths of one percent) of the recommendation of North Star Witness Solomon, whose recommendation is viewed by the Judge as being biased toward a lower ROE result with respect to NSP when compared to the more objective analyses of Thompson and Marcus. See Discussion, p. 20 of Part I.

ME3 Proposal

392. Minnesotans for an Energy Efficient Economy (ME3) filed testimony and presented argument in this case with a goal of emphasizing its belief that NSP's Demand Side Management/Conservation Improvement Program (DSM/CIP) efforts commit a smaller proportion of funds to energy conservation and emphasize load management more than is appropriate. ME3 contends the Company is spending only a fraction of what it should on reducing consumption of energy, in part because it has no disincentive under current rate structures from producing and selling as much electrical energy as it can. And, by pursuing and promoting load management strategies, NSP is merely shifting the time periods during which the same amount of electricity is produced without affecting the overall demand for energy. ME3 introduced evidence that, at a time when NSP is committing just over one percent of its gross operating revenues to its CIP budget, utilities in other states are spending between 2.5 and 5%.

393. While not recommending a reduction in load management programs, ME3 advocates a far greater commitment than NSP now seeks or the Commissioner of the Department of Public Service has authorized the Company to spend on conservation programs aimed at saving energy and preventing its production. ME3 maintains that current CIP filings by NSP result in energy savings of less than one-half of one percent, several times too low. It argues that NSP will continue its pattern of "meager, peripheral attempts to reduce energy consumption" until mandated to change. Specifically, the Company must move toward the existing potential of saving between one-third and one-half of the energy currently consumed on its system. ME3 advocates an Order in this case to save two percent per year beginning in 1992. Such an Order would represent a major upscaling of NSP's current efforts, which capture only one percent of potential savings in energy

production.

As an example, ME3 offers evidence that the municipal utility in Osage, Iowa has instituted consumer programs in that community and seen a change in power usage of ten percent between 1980 and 1987.

394. ME3 criticizes NSP for measuring the success of DSM projects inappropriately. The Company's use of a "non-participant" testing methodology to evaluate a program's effectiveness is biased against the saving of energy, ME maintains. It argues that the Company should be required to evaluate conservation programs within a "from an all ratepayers" perspective, using a societal cost test to measure the benefits/costs to society of the implementation of a particular CIP program or overall Demand-Side Management plans.

395. ME3 proposes implementation of a "Demand Side Demonstration Initiative" to determine and document the achievable potential of cost-effective strategic energy efficiency and to provide a baseline for expected demand-side performance after the demonstration period ends. The demonstration will stress conservation over load management because the Company is already willing to promote load management strategies and has been reticent about marketing conservation programs. The operation of the Initiative would be in the hands of the panel, including representatives of NSP, the PUC, the DPS, ME3 and an independent third party. Others may be added as non-voting members. Proposals would be submitted and the form of demonstration projects set by the oversight panel. The program would last three years and, depending on the projects chosen, the Initiative could cost NSP's ratepayers between \$50 and \$100 million.

396. As noted in Part I of this Report, it is appropriate for ME3 to present its proposals in a CIP docket convened by the Commissioner of Public Service. Certain details of its concerns and proposals are presented above, should the Commission decide it is appropriate to implement any of ME3's proposals at this time. ME3's concerns are important -- as pointed out by the Seniors in their Reply Brief, NSP's proposed retaining (and raising) of a discount for electric space-heating customers may create a disincentive to the saving of energy on the part of such customers. ME3's objective of achieving reductions in energy consumption is not advanced by offering discounts for using more energy.

Based upon the foregoing Findings of Fact and, to the extent necessary, upon the Findings of Fact in Part I, the Administrative Law Judge makes the following:

CONCLUSIONS

65. Any of the above Findings of Fact more properly considered Conclusions are hereby adopted as such.

66. The Commission, in determining an appropriate rate design, should consider both cost and non-cost factors in the

proper exercise of its quasi-legislative function.

67. It is appropriate to adopt the Embedded Cost Study proposed by NSP in this proceeding, with the modifications recommended by the Department of Public Service.

68. It is appropriate to reject the Fixed/Variable Cost Study proposal by Champion International, and Champion's alternative cost study based on capital-Fuel Substitution methodology.

69. It is appropriate to treat the winter interruptible loads of Peak Controlled customers on NSP's system as being essentially firm for costing purposes. North Star's recommendation to treat interruptible loads as if they impose no generation and transmission capacity costs is inappropriate and should not be adopted.

70. It is appropriate to order NSP to study its method of classifying and allocating distribution costs for presentation in its next rate case filing, along with appropriate adjustments to its Embedded Cost Study resulting from examination of distribution costs.

70. It is appropriate to adopt the Marginal Cost Study proposed by NSP in this proceeding.

71. MSP's proposed class revenue allocations are just and reasonable with respect to the relative revenue responsibility assigned to its four major classes of ratepayers. It is appropriate to adopt those general class revenue proportional allocations.

72. It is appropriate to adjust the allocation of the revenue responsibility among NSP's four major classes of ratepayers in accordance with the reduced revenue deficiency determined in Part I hereof. That adjustment results in a revenue increase of 4.9% to both the Residential and Commercial and Industrial classes, a 1.4% increase for Public Street and Highway Lighting, and a 5.0% increase in Other Sales to Public Authorities.

73. It is appropriate to reject NSP's proposal to increase the present Winter End-Step Discount of .23¢ for each kWh in excess of 1,000 kWh per month to 1¢ per kWh.

74. It is appropriate to eliminate the Winter End-Step declining block rate for non-space heating customers and adopt a flat rate based on usage.

75. It is appropriate to adopt the DPS/OAG proposal to eliminate the discount for space heating customers using over 1,000 kWh per month and replace it with a flat rate and an additional flat space-heating rate for such customers containing a lower energy charge during the winter, a \$5.00 customer charge and verification of space-heating use.

76. If NSP is granted a lower increase than initially requested, it is appropriate to adjust downward energy rates so

as to retain the same proportion of revenue to be recovered from space heating and non-space heating customers.

77. It is appropriate to reject NSP's proposal, also supported by the DPS, to reduce and/or phase out the Conservation Rate Break (CRB) in this proceeding.

78. It is appropriate to reject the Inverted Rate proposal of the Minnesota Senior Federation in this proceeding.

79. NSP's proposals to change Residential Time-of-Day rates, and to adjust the customer and energy charges in the Energy Controlled Service and Limited Off-Peak Service rates are appropriate for adoption in this proceeding.

80. It is appropriate to adopt NSP's proposed rate design for the General Service class.

81. It is appropriate to adopt the DPS proposal for imposing mandatory Time-of-Day (TOD) rates on NSP's Commercial and Industrial customers with loads of 500 KW or greater.

82. It is appropriate to adopt NSP's Split-Service provision proposal.

83. It is appropriate to adopt NSP's proposed Competitive Service Rider (CSR), modified as proposed by the DPS.

84. It is appropriate to adopt the Interruptible Service rates proposed by NSP in this proceeding.

85. It is appropriate for NSP to price the level of Interruptible Service demand charge discounts based on value of service considerations.

86. It is inappropriate to adopt North Star's proposed Large Interruptible Service demand charge credit of \$5.12.

87. It is inappropriate to adopt Intervenor proposals for increases in the demand charge discounts in General Service rates. The proposals unnecessarily shift revenue responsibility to firm service customers without a corresponding benefit.

88. North Star's proposal to eliminate the allocation of winter capacity-related costs to Peak Controlled customers is inappropriate for adoption in this proceeding.

89. It is appropriate to reject the Metalcasters of Minnesota's proposal that the Peak Controlled and Energy Controlled rates be set at fixed percentages of firm service demand charges.

90. It is appropriate to continue NSP's interruptible discount levels of \$2.91 per kW for Peak Controlled service and \$3.10 per kW for Energy Controlled service during the test year.

91. It is appropriate to reject North Star's proposal for a Large Interruptible Service/Energy Controlled (LIS/EC) tariff,

which would apply to customers with at least 5 MW of interruptible load.

92. It is appropriate to order NSP to file a report exploring different interruptible options within 60 days of the final Order in this case.

93. The Municipal Pumping rates proposed by NSP are appropriate for adoption in this proceeding and result in rates that are just and reasonable.

94. The proposal of the Board of Water Commissioners of the City of St. Paul for a three-period Time-of-Day rate should be adopted.

95. It is appropriate to adopt the Company's proposed adjustments to Direct Current Service, Nicollet Mall Service, Fire and Civil Defense Siren Service, Excess Energy-St. Anthony Falls Lock and Dam, Excess Footage Charges and Automatic Protective Lighting Service Rates.

96. It is appropriate to allow the Company to clarify in its General Rules and Regulations that the Business Interruption provision applies to both the Annual Minimum Demand Charge and the Demand Ratchet.

97. It is appropriate to allow NSP to develop a Service Reconnection Charge and Service Relock Charge for implementation during the test year. It is appropriate to set the Company's Service Reconnection Charge at \$15.00 and its Service Relock Charge at \$50.00, in accordance with the recommendations of the DPS.

98. If the Commission decides it is appropriate to increase interruptible discounts, it is appropriate to adopt Champion International's proposal regarding such discounts, as modified by NSP's proposal to also increase the discount to Energy Controlled interruptible customers by the same amount.

99. It is appropriate to reject NSP's proposed surcharge for Major Roadway Maintenance.

100. It is appropriate to reject the DPS proposal to deregulate the provision of repair and maintenance services to customer-owned street lighting.

THIS REPORT IS NOT AN ORDER AND NO AUTHORITY IS GRANTED HEREIN. THE PUBLIC UTILITIES COMMISSION WILL ISSUE THE ORDER OF AUTHORITY WHICH MAY ADOPT OR DIFFER FROM THE FOLLOWING RECOMMENDATIONS.

Based upon the foregoing Conclusions, and the Conclusions in Part I of this Report, it is the recommendation of the Administrative Law Judge to the Public Utilities Commission that it issue the following:

ORDER

1. Northern States Power Company is entitled to increased

gross annual revenues of \$59,634,000 to produce annual operating revenues of \$1,443,544,000 from Minnesota retail customers for annual periods beginning January 1, 1991.

2. Within 30 days of the service date of this Order, NSP shall file with the Commission for its review and approval, and serve on all parties in this proceeding, revised schedules of rates and charges reflecting the revenue requirement for annual periods beginning January 1, 1991, and the rate design decisions contained herein. NSP shall include proposed customer notices explaining the final rates. Parties shall have 15 days to comment.

3. (If the Commission orders an Interim Rate Refund) Within 30 days of the service date of this Order, the Company shall file with the Commission for its review and approval, and serve upon all parties in this proceeding, a proposed plan for refunding to all customers with interest the revenue collected during the Interim Rate period in excess of the amount authorized herein. The refund may be reduced by the CIP tracker balance with carrying charges. Parties shall have 15 days to comment.

4. Prior to the filing of its next general rate case, the Company is required to make additional information available to the Commission and potential intervenors regarding the Company's budget process, as recommended by the Department of Public Service and summarized on page 33 of the Report of the Administrative Law Judge in this Docket, to help assure future verification of NSP's expenditures and aid review of the next rate filing.

5. The Company is ordered to provide notice, through a billing insert or initial customer contact, to customers of the option to be dropped from mailing lists provided to entities outside NSP.

6. NSP is ordered to compensate properly its electric operations for the use of its mailing lists, billing system and Customer Business Office personnel by its unregulated Advantage Service operations so that costs will be accounted for properly in future general rate case filings.

7. The Commission's Order on NSP's Motion to Update Filing allowing adjustment of the Company's rate increase request by \$5,672,832, is affirmed.

8. The Stipulation on Deferred Expenses reducing NSP's revenue requirements by \$3,257,900 is adopted.

9. The Company's Motion to Reopen the Record and reduce test year revenue requirements by \$1,973,701 for an adjustment to incentive compensation amounts is granted.

10. The Motion of Minnesota Energy Consumers for sanctions regarding Incentive Compensation in this proceeding, which would deny recovery of NSP's incentive compensation costs totally \$14,734,000 is denied.

11. It is ordered that an investigation, pursuant to Minn. Stat. 216B.17, into the question of whether NSP's non-regulated refuse derived fuel (RDF) business has been subsidized improperly by NSP's regulated ratepayers commence immediately. All testimonial and documentary evidence accepted into the record of this proceeding is bound over to the record of that investigation proceeding.

12. The Motion of Minnesota Energy Consumers to Dismiss Minnesota Utility Investors (MUI) as a party to this proceeding is denied.

13. The Company is ordered to undertake a study of its method of classifying and allocating distribution costs for presentation in its next rate case filing, along with appropriate adjustments to its Embedded Cost Study that result from its examination of distribution costs.

14. Within 90 days of this Order, the Company is required to submit a report describing how it plans to implement required Time-of-Day rates for large General Service customers with loads of 500 kW and greater. Implementation of required Time-of-Day rates will commence nine months from the date of this Order.

15. Within 60 days of the final Order in this case, the Company is ordered to file a report exploring different interruptible rate options, including the establishment of a priority schedule with respect to the interruption of different customer groups. Interested parties will be allowed an additional 20 days to comment on NSP's filing.

Dated this day of October, 1991.

RICHARD C. LUIS
Administrative Law Judge

NOTICE

Pursuant to Minn. Stat. 14.62, subd. 1, the agency is required to serve its final decision upon each party and the Administrative Law Judge by first class mail.

Reported: Harold Reiner and Associates
 Transcripts Prepared.

October 4, 1991

Richard Lancaster, Executive Secretary
Minnesota Public Utilities Commission
780 American Center Building
160 East Kellogg Boulevard
St. Paul, Minnesota 55101

Re: In the Matter of the Application of Northern States Power
Company (NSP) for Authority to Increase Its Rates for Electric
Service in Minnesota; OAH Docket No. 7-2500-5291-2; PUC Docket
No. E-002/GR-91-165

Dear Mr. Lancaster:

Enclosed herewith and served upon you are the Findings of Fact,
Conclusions and Recommended Order - Part II (Rate Design) in the
above-referenced matter. The record in this matter will be
delivered
under separate cover.

Very truly yours,

RICHARD C. LUIS
Administrative Law Judge

Telephone: 612/349-2542

lr
Enc.
cc: All Parties and Counsel