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Working Party No. 2 on Competition and Regulation

ROUNDTABLE ON NON-COMMERCIAL SERVICE OBLIGATIONS AND LIBERALIZATION

-- United States --

The attached document is submitted by the delegation of the United States to the Working Party No. 2 of the Competition Committee FOR DISCUSSION under Item VII at its forthcoming meeting on 13 and 14 October 2003.

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I. Introduction[1]

1. In response to the "Guide for Country Submissions" for the 13 October, 2003 *Roundtable on Non-Commercial Service Obligations and Liberalization*, below we discuss redistribution or "universal service" practices in three U.S. industries: telecommunications, electricity, and postal services. All three industries have undergone at least a degree of liberalization with respect to entry into certain vertical segments and complementary products. We address both historical practices and the interactions between liberalization and redistribution practices in these industries. Much of the experience with market liberalization is recent and evolving. Established economic principles provide a well-developed context in which to consider this still evolving experience.

2. At present, the three industry sectors are at very different levels of privatization and liberalization. In the electricity sector, the vast majority of assets are and have been in private hands, but these firms were vertically integrated and subject to cost-based rate regulation at both the retail and wholesale level. Over the past decade, regulatory reform has resulted in substantial unbundling of generation from transmission and distribution. Competition in wholesale generation is still a work in progress, but significant strides have been made. Transmission and generation remain regulated, but control of transmission access and protocols is being transferred to regional transmission organizations with less incentive to discriminate against independent generators seeking access to transmission. Sixteen of the fifty states have customer choice programs at the retail level. These too are a work in progress.

3. In the postal sector, the federal government remains the statutorily protected monopoly provider for non-expedited letters. Various postal reform proposals have recently been made by a Presidential Commission designed to increase efficiency and improve regulatory oversight. Outside of the core pickup and delivery functions for non-expedited letters, competition is much more intense. In package and overnight delivery, private firms have been allowed to compete and have taken most of the business-to-business and business-to-consumer traffic away from the U.S. Postal Service. In pre-delivery sorting, mail processing, and transportation of mail, customers and third-party private printing and sorting firms have largely displaced the USPS in return for postal worksharing discounts. The USPS has also contracted out a portion of rural delivery routes.

4. Local telephone exchange services were traditionally provided by private, franchised monopolies, with approximately 80 percent of local lines owned and serviced by AT&T. Long-distance service effectively was opened to competition in 1984 when AT&T's local operating companies were divested and required to offer equal access to all long-distance providers. By 2002, AT&T's rivals earned about 65 percent of switched long-distance revenues. The Telecommunications Act of 1996 voided legal barriers to local exchange competition and required incumbent providers of exchange services to interconnect their networks with competitors, unbundle those elements of their networks that competitors needed to overcome significant cost or service impairments, and make retail services available at wholesale prices for resale by competitors. Legal challenges and the questionable incentives for the major players to cooperate with one another slowed implementation, and only over the last two years has the FCC found most markets to be open to competition.

5. These comments are organized as follows: Section II contains recommendations and comments that have applicability across most industries that historically have been subject to service obligations, pricing practices or other programs oriented toward redistribution. Sections III, IV, and V examine these practices in the electricity, postal, and telecommunications industries, respectively.

II. Comments of General Applicability

6. "Universal service" programs are complex political products. The implicit funding and disbursement methods that historically have characterized "universal service" programs, and often still do, make it difficult for contributors and beneficiaries alike to know with precision how they are affected by the programs, and in many cases, whether they are a net beneficiary or contributor. Regulators seldom study, or publicize, the actual effects of such programs on distribution, penetration, or economic efficiency. Traditionally, these programs have been shielded from a degree of critical scrutiny by the murky cost structure of the regulated monopoly firm.

Impact of Liberalization

7. Where efficient competition is possible, liberalization eventually will strip away the funding from implicitly financed redistribution programs because entrants will offer lower-priced service to the high-margin customers that traditionally provided funding. Alternative funding mechanisms, consistent with competition, become necessary to the extent that pricing structures inconsistent with market-based pricing are to be maintained. In the United States the recent approach under liberalization usually has been to move toward explicit funding of distributional goals. Fees and taxes[2] are levied on entrants and the incumbent alike to the extent they provide the services designated as sources of funding.[3]

8. Liberalization may also call for more explicit and competitively neutral ways of distributing benefits. Entrants may turn out to be the most efficient suppliers of goods to beneficiaries, or both entrants and incumbents may need to take advantage of scope economies between subsidized goods or customers and others. Portable subsidies – subsidies that go to the qualified firm that sells an eligible service to an eligible customer regardless of the firm's identity or technology – represent one explicit and competitively neutral approach to paying benefits anticipated under U.S. telecommunication's law.[4]

9. The prospect of increased transparency under competition has created political difficulties for regulators who must more explicitly determine who gains and who loses. Where this has had an effect on the level of transfers, as it has in electricity and increasingly in telecommunications, the impact generally has been to reduce the size of redistribution programs or the amount of resources transferred.[5] Although politically wrenching, the closer scrutiny also can be seen as a healthy constraint on public spending. Studies of implicit subsidies in regulated industries in the U.S. typically have found substantial economic efficiency losses associated with regulated pricing structures, and/or observed impacts and regulatory behaviors that are hard to defend as part of a consistent approach to welfare maximization. It is broadly consistent with the public choice literature in economics that the cost of obtaining information on the effects of policies affects influences on the regulatory process.

Traditional Terms Lack Precise Meaning and Contribute to Confused Policy Discussion

10. Three terms often used in the context of distributing the costs and benefits of utility services – "universal service," "noncommercial service," and "universal service obligations" – lack precise meaning. In the U.S., the term "universal service" is applied to programs and rate designs that allocate utility services among customers, traditionally by setting prices and service levels so that a utility delivers a targeted service to some customers that it would not provide them voluntarily at the price they pay for it without an additional source of support. Today, an *explicit* additional source of support may or may not exist. In practice, whether a particular "universal service" program or price structure actually increases the customer penetration of a targeted service is an empirical matter. (*E.g.,* some academic studies in telecommunications have come to the opposite conclusion with respect to basic aspects of rate design sometimes claimed to increase penetration.)

11. Although firms may not voluntarily provide the targeted services in question at prices that are set below cost, it does not follow that targeted customers would not buy them or firms would not provide them at prices that did cover economic cost. A number of products delivered as "noncommercial services" likely are "noncommercial" only because their prices are set below cost. Most "noncommercial services" have not been subjected, in modern times, to a market test to determine whether in fact they are "commercial services" that customers would buy, and firms would deliver, if priced at economic cost.[6]

12. "Universal service obligations" that require a provider to supply some service at a price less than cost are not a *necessary* ingredient to redistribution programs, or government procurement programs generally, for that matter. It is useful to consider a wider set of possible redistribution programs since requiring firms to trade at below cost prices is likely to limit efficiency in a wide range of settings, and particularly if consumer choice, potentially augmented by portable subsidies, could discipline the market. The presumption should be in favor of voluntary trading unless strong evidence shows this to be inferior. In the United States, the Telecommunications Act of 1996 called for universal service payments that, among other things, were "specific" and "sufficient."

Additional Comments

- *Redistribution programs can be constructed that are compatible with efficient production under competition.* Taxation and social welfare transfers among citizens normally are compatible with market production under competition. Similarly, redistribution programs for the traditional utility industries can be compatible with market competition in these industries under liberalized entry. The key ingredients are establishing a competitively neutral and efficient source of funding, and, to the extent feasible, competitively neutral and efficient distribution of benefits. Competitively neutral funding means that the incidence of "taxation" falls on specified products, or specified products delivered to certain customers, independent of the identity of the firm or technology used in providing them, so as not to distort the costs of competing firms. Competitively neutral distribution of benefits means that benefits are available when specified products are delivered to designated customers, independent of the identity of the firm or technology used in providing them, so as not to distort the costs or revenues of competing firms. This approach attempts to preserve the incentives and discipline imparted by customer choice and voluntary provision of goods by providers. Competitively neutral sources of funds can be general taxation, fixed subscription fees, or usage fees, although the efficiency with which funds are raised will vary by source and circumstance.

- *The greater transparency of redistribution under liberalization and competition may result in changes in program impact or reductions in the amounts transferred among customer groups*. Greater transparency is necessary in a competitive environment because competitors will undercut the margins on products that provided implicit funding unless fundraising is moved to the retail level or competitors are also required to contribute. More transparency will change the politics of distribution as constituencies become more aware of the costs, benefits and tax incidence of programs. The experience in the United States is that programs, in effect, were reduced in size in the electric industry, and a number of states have rebalanced rates to more closely reflect costs of service in telephone services, as these industries have been liberalized.

- *Redistribution programs in industries with network externalities may fail to realize the theoretical potential to increase economic efficiency.* The theoretical potential for efficiency gains exists if customers, who would not otherwise do so, use a network as a result of a subsidy and thus provide benefits to other users of the network. (For example a student with a phone provides benefits to her parents who call her.) It is difficult to realize such benefits because raising funds to provide a subsidy typically involves an efficiency cost and also because programs seldom target subsidy benefits only or primarily to those who would not otherwise subscribe. (In the case of the hypothetical student, for example, she might otherwise use phone service purchased by her parents, a university, a wireless connection she purchased herself, or a connection shared with housemates.)

13. In the U.S., traditional universal service programs in telecommunications were funded in significant part from elastically demanded products such as access for long distance services and value-added features. This funding substantially and inefficiently reduced demand for these services. Benefits were broadly targeted, with most subsidized individuals likely to be on the phone network in any case. Most of the subsidy effectively went to subscription, a very inelastically demanded product. Some have estimated that the effect of the long-distance to local subscription transfer has been not only reduced efficiency, but reduced telephone penetration as well. Thus the efficiency effects of actual programs, even in network industries, can, on balance, run counter to potential benefits. Others have noted that, historically, it is the failure to pay high long distance bills that often results in disconnection of service.

14. This experience suggests comparing the intended and actual results of a program. If it can be shown that customers that are not directly subsidized enjoy significant benefits from network externalities because subsidies increase the number of other customers on the network with whom they interact, programs that increase the number of users of the network can make sense at the right cost. However, where the effect is redistribution without externalities, cash benefits that recipients can use either for phone service or other products are likely to be valued more highly by the recipients who may prefer to purchase a different product.

- *The fact that market prices under competition or liberalization are not the same as prices under regulation or state ownership is not necessarily a criticism of the prices produced by competition or liberalization*. Price structures of state and regulated monopolies are often economically inefficient. More generally, when crafting redistribution programs for a liberalized entry environment, it makes sense to more deliberately and explicitly consider deadweight losses, the relative welfare weights among customers they may imply, and the consistency of these weights with other social programs. Welfare maximization means relative welfare weights attached to individuals should be the same across different industries and different programs – if it costs $2 to transfer $1 from Joe to Sam in the electric industry, then, other things equal, it should also cost $2 to transfer $1 from Joe to Sam in the telecommunications industry and in the general tax system. Otherwise there is a less costly way to make Sam better off.

- *Obligations to serve customers at below-cost prices normally eliminate competition for those customers or eliminate competition for some of the value-added*. Opportunities to compete at the retail level in electricity markets were substantially eliminated in the U.S., in areas where provider of last resort (POLR) rates were set below cost. Facilities-based providers of telephony services have been slow to sink investments to compete to serve the residential customers of incumbents who are obligated by state regulators to serve these customers at rates that can be below cost. In addition to interfering with price competition, placing obligations to serve large service territories is likely to raise entry barriers.

  An obligation to serve can have some merit in certain cases where regulators do not understand customer-to-customer cost of service variations nearly as well as providers do in areas where subsidized service is to be provided. If the regulator truly insists on a uniform below-cost price, it may lack sufficient cost information to specify the set of explicit and sufficient subsidies that produce a uniform price. Thus, under monopoly with traditional price regulation, the obligation to serve may necessarily be an obligation to serve some at a below-cost price. Under competition, and with no firm having an obligation to serve, prices will follow costs, as modified by subsidies, to the extent that providers find that distinguishing cost differences is cheap enough to justify the benefits.

- *Choosing an appropriate source of funding for programs affects efficiency in production and consumption (i.e., both technical and allocative efficiency).*

  - Taxing elastically demanded products tends to be socially costly because, other things equal, it distorts consumption more than does taxing inelastically demanded products. In the industries discussed below, demand for subscription tends to be inelastic and demand for utilization is relatively elastic.

  - The set of products available for taxation matters. In general, broadening the set of products that may be taxed will increase the efficiency with which funds can be raised. (Of course if there are sufficient perfectly inelastic demands left to be exploited, increasing taxes on additional elastically demanded products is not efficient.)

  - The availability and use of general revenues for funding may increase allocative efficiency in many cases. A possible countervailing factor is that cost discipline may increase when a firm must cover costs entirely with its own revenues. This is one reason why subsidies from the state treasury to state monopolies have been reduced in many cases. This argument may be less compelling where liberalization produces an environment in which competition effectively disciplines costs.

  - Political economy is also likely to be affected by the source of funds. The visibility of taxes, and the understanding of the costs they impose, varies with the source of taxation.

  - Access inputs provided by the incumbent are often used as a source of funding for redistribution. Even if an attempt is made to tax access inputs in competitively neutral fashion (*i.e.,* taxed equally whether used by incumbent or competitor), production is likely to be distorted if competitors have some ability to bypass these inputs or reduce their proportion in final services (*i.e.,* if variable proportions technology is used.)

- *Overbroad targeting of in-kind benefits can carry a large efficiency cost.* First, the deadweight burden of taxation, to a rough approximation, increases in proportion to the square of the (per unit) tax, making bigger programs disproportionately costly. Second, a directed subsidy, by reducing price below cost, can encourage excessive consumption. The increase in consumption of subsidized product that a customer engages in due to the subsidy is worth less to that customer than the alternative products that she could purchase with the same resources. Only where the value of that consumption to *other* consumers (due to externalities), or to *other* citizens (in some other way) more than makes up for this difference, is net value added by subsidizing these customers.

- *Where competition to provide universal service benefits is feasible, it may have efficiency advantages.* The incumbent may not turn out to be the lowest cost provider of universal services, or provide goods of the right quality. Indeed, even if the incumbent remains the lowest cost provider, competition may drive down the incumbent's cost. Competition for other, unsubsidized, services in the industry may be affected by the ability of competitors to take advantage of scope economies with universal service products. Customers may choose to take service from a competing technology that turns out to be more appropriate.

- *The costs of redistribution programs are likely to be reduced if subsidies do not depend on the technology by which the service is delivered*. This is most likely to result in the most cost-effective service, particularly if customers are allowed to choose their provider.

III. Electricity

Electricity Sector Background Notes

15. Although the responses here are directed largely to retail electric sector liberalization, many of the same issues and experiences also apply to liberalization of the retail natural gas sector. Further, in many areas of the U.S., the electricity and natural gas retail distribution companies are the same entity.

16. Liberalization of the electricity sector at the retail level is largely within the jurisdiction of state regulators and legislatures. Less than half of the states have implemented retail competition programs in the electric power sector. Many state liberalization programs continue to be in a transition phase. Most states undertaking liberalization found that incumbent private utilities would experience stranded costs as a result of liberalization. Stranded costs are the difference between the stream of income for the utility under regulation and the stream of income it is likely to experience under liberalization. States generally felt obligated (under the theory of regulatory contract) to levy fees to pay back the stranded costs to regulated utilities. The transition period is generally defined by a state as the time during which fees are being assessed to recover the stranded costs of utilities in the state.[7]

17. Often the transition period or stranded cost recovery period is accompanied by a government requirement that the incumbent distribution utility offer retail electricity at fixed rates or at regulated rates to customers that do not select a retail marketer. This service for non-choosing retail customers is typically called provider of last resort (POLR) service and is usually available to all classes of retail customers. The fixed rates often associated with the retail service supplied by the distribution utility arose from the political agreements reached to liberalize the sector and to pay for the stranded costs of regulated private utilities.

18. When POLR rates are fixed, they do not reflect ongoing changes in wholesale prices of electricity. Between 2000 and the present, wholesale electricity prices increased enough during some periods of time to make entry and continued operation of retail marketers unprofitable in states with fixed POLR prices. Consequently, both competition between retail marketers and customer switching away from POLR service in the states with liberalization policies has been less than expected. The most successful retail marketers in this environment have been the suppliers of Agreen@ power for which retail customers expect to pay a premium over POLR rates.

19. Wide differences in the approaches used by various states have resulted in wide differences in competition and switching behavior. The well-known problems associated with California′s retail and wholesale electricity liberalization program[8] have discouraged other states from liberalizing. In 2003, some renewed progress has been reported in state liberalization programs.[9] In particular, Texas has moved forward with retail competition and initial results are quite encouraging. State decisions to adjust prices for POLR service to better reflect wholesale prices have revived entry and expansion efforts of retail marketers and the interest of consumers in switching away from POLR service in several states where retail competition was faltering.

20. In general, the proportion of customers switching retail marketers has been highest among large industrial and commercial customers and lowest among residential customers.

21. Liberalization of the electricity sector at the wholesale level is largely under the jurisdiction of the Federal Energy Regulatory Commission (FERC). FERC=s reform efforts continue toward the goal of establishing independent grid operators across the country. Substantial opposition from some state regulators and vertically integrated utilities has slowed the pace of reform at the national level. As in the retail portion of the sector, events in California have undermined confidence in liberalization policies at the wholesale level.

Responses to Questions (Electricity Sector)

Q: Please list the primary telecommunications, post, transport and electricity services that are covered by non-commercial service obligations.

22. In the electric power sector, the primary existing non-commercial service obligations involve subsidies or protective terms-of-service for low-income households.[10] These policies generally are implemented at the state or local government level because jurisdiction over retail electricity sales and marketing is retained by the states.[11] Some of these programs are administered by the states with funding from the federal government. The non-commercial policy obligations include various combinations of reduced rates, explicit subsidies, subsidies for improved insulation and other weather-proofing, prohibitions against discontinuing service during the winter (and/or summer) when extreme temperatures pose a health risk, and arrangements for a Aprovider-of-last-resort@ (POLR) service for customers that cannot or have not reached an agreement with an independent retail marketer.[12] POLR service itself might be interpreted as a non-commercial service obligation when the price of POLR service makes it unremunerative, but another interpretation is that POLR service is a long-term contractual obligation that turned out to be a bad risk for the suppliers involved. All of these policies except POLR service were in place before liberalization and most have been continued to various degrees under liberalization.

23. In the past, particularly during the Great Depression, the federal government pursued large-scale regional development and rural electrification programs. Under these programs, government grants (both federal and state) and loans with below-market interest rates financed rural distribution systems and hydroelectric dams, for example, in areas that private investors had not found to be attractive.[13] Legacies of these programs include the Tennessee Valley Authority, the Bonneville Power Administration, the Salt River Project, and the Power Authority of the State of New York. The government also fostered the development of numerous rural electric cooperatives under its rural electrification program.

Q: Are there any general government policies towards USOs? … What services are currently being considered as potential universal service obligations?

24. Because the retail non-commercial service obligations in the electricity sector are generally under the control of states, there is no uniform policy regarding USOs in the U.S. electric power sector. One state, Maine, has a policy of contracting out for POLR service.[14] Other states have assigned the POLR service to the retail distribution utility.

Q: Have non-commercial service obligations impacted efforts at liberalization? Please discuss how, in liberalizing industries, USOs have been met.

25. A number of public programs including programs to assist low-income electric power customers have traditionally been lumped together and paid for within regulated, bundled rates.[15] During the liberalization process, revenues for these programs have typically been unbundled from the regulated rates and financed through explicit excise taxes on electric power consumption.

26. Most commonly, making the payments for these programs explicit has resulted in scaling them back. An exception is consumer education. In most state liberalization programs, substantial customer education programs have accompanied the opening of customer choice programs.

27. In some states, some of the subsidies have traditionally been financed through charitable giving programs operated by the distribution utilities. This aspect of financing for public programs has not been directly affected by liberalization. By far the most profound decisions and effects linking liberalization with non-commercial service obligations have concerned the pricing of POLR services. Most states undergoing liberalization elected to establish fixed, regulated rates for POLR service that were below the pre-liberalization level and that were not closely related to ongoing changes in wholesale electric power prices. These decisions about POLR service pricing were generally developed by liberalization proponents as a means to increase public support for liberalization C retail customers realized an immediate benefit from liberalization.

28. With few exceptions, the state decisions to de-couple retail from wholesale prices have had unforeseen[16] adverse consequences for incumbent firms, entrants, and consumers. In the case of California, the decision to fix retail rates had extremely adverse effects when wholesale prices rose in 2000 and 2001. During this period, California=s wholesale prices rose above retail prices, incumbent distribution utilities (the load serving entities) faced bankruptcy, efficient retail marketing entrants could not profitably enter or continue to supply the market, and consumers faced blackouts as supplies shrank while demand continued to grow. Eventually, the state acted to reduce wholesale prices (through long-term contracting) and increase retail prices, but this intervention proved to be a costly policy step as well. While the effects of fixed POLR prices were not as dire in other states (in large part because other states continued to have long-term supply contracts in place for most power supplies, while California did not), lack of entry and low levels of customer switching are common among the states that adopted customer choice programs. Only recently, as wholesale prices have aligned more closely with retail rates, have retail entry and customer switching resumed in the liberalizing states.

29. Another form of interaction between POLR pricing and market liberalization concerns recovery of stranded costs. Stranded costs are costs of an incumbent, vertically integrated utility that are not likely to be recovered under liberalization, but which would have been recovered under traditional regulation of electric utilities (that is the costs were prudently incurred and, therefore, allowed to be included in the rate base). In several states, stranded costs were found to be large. Incumbent utilities offering POLR service may have had incentives and the ability to discourage efficient entry by setting artificially low prices for the energy portion of the retail customers= electricity bills. They could afford to do this because they were allowed to make up for these low energy prices by correspondingly higher billings for stranded cost recovery.[17] Entrants compete against the POLR supplier on the basis of the prices for the energy portion of the bill and do not have access to the compensatory stream of stranded cost payments. Consequently an artificially low energy price for POLR service may exclude efficient entry at little cost to the incumbent firm offering POLR service. This pricing distortion may have contributed to the low entry and switching rates in some states undertaking liberalization.

Q: Have non-commercial service obligations changed with privatisation? Please discuss the role of privatisation in the definition and financing of USO=s.

30. Privatization has not played a significant role in financing the USO because the vast majority of electricity industry assets are and have been privately owned. The most important changes that have accompanied liberalization have been in the sources of funding for the non-commercial service obligations. As described earlier, in most states with liberalization policies, financing of public programs has become more transparent. Charges for these programs now often appear as separate lines on the customers= electricity bills.

Q: Deciding to make a service a USO. Please explain factors that are considered for deciding whether a service should be a universal service obligation. Are these designations reviewed on a regular basis? If not, why not?

31. The largest non-commercial service obligation programs (other than POLR service) provide subsidies of various types for electric power consumption by low-income households.[18] The smaller programs such as research on new energy sources and demand-side management programs appear to be associated with a public-goods, externality rationale.

32. Liberalization has often resulted in reconsideration of these programs. Generally, reexamination of the programs has led to contraction of expenditures on these programs. Prior to the liberalization, these programs were stable or expanding over the years without fundamental reexaminations of the programs. Lack of transparency may have muted concern about the costs of these programs.

33. There were four principle rationales for instituting POLR service: (1) to avoid the appearance of government forcing customers to pick a new supplier, (2) to avoid customers being cut off if a retail marketer went out of business, (3) to avoid customers being cut off if all retail marketers refused to take the customer because of the customer=s credit risk, and (4) to assure that there would be at least one supplier offering service at a rate similar to or below the pre-liberalization rate. Rationales 2 and 3 come closest to the universal service concept.

Q: State whether universal service access is also considered as an option. For example, with Internet service, a user can go to an Internet café to access the network or stay at home. Staying at home requires access to a computer, which many disadvantaged consumers do not have. Thus universal service access may be preferred, through sharing of common facilities.

34. To the best of our knowledge, universal access has not been considered sufficient to meet the health and safety concerns that underlie the non-commercial service programs in the electricity sector in the U.S.

Q: Evidence of underprovision. Please state whether there is any evidence that, without USOs, a service would be underprovided and that many people would not choose to purchase the service. What sort of evidence is required to show that an individual service should be subsidized via a USO? Are the subsidies general or targeted at the desired user group that would not receive the service?

35. We do not know of any systematic indication that affected consumers would fail to spend enough on electricity absent the subsidies to low-income households. However, continued support for these programs may come in part from occasional media coverage of deaths or injuries suffered by poor or elderly customers without electric power during extreme weather conditions or by instances in which such customers have faced choices between hunger and life-threatening heat or cold.

36. Historically, policies regarding rural electrification have been based on the view that there are positive externalities associated with access to electric power that cause underprovision in high cost areas B namely rural areas.[19] Expansion of electricity use in rural areas under electrification programs at least indicates that some previously unserved customers desired to use electric power.

37. Continued subsidies in the form of low-interest loans or government loan guarantees are directed primarily at rural electric cooperatives. We know of no evidence about remaining unserved or underserved populations or the significance of ongoing subsidies to maintaining service in low-income rural areas.

38. To the extent that subsidies do more than internalize positive externalities, they may create incentives that result in inefficient decision about location, activities, and investments. News media attention is sometimes drawn to extreme examples of these inefficient incentives at work.

Q: Entry barriers. Does establishing a USO occur in conjunction with entry restrictions that exclude competitors from part or all of a market? Is the argument based on cream-skimming concerns? If so, is any evidence required that, in the presence of cream-skimming, total industry costs will increase significantly? Are entry barriers less appropriate if an industry is operating inefficiently?

39. In most states undertaking liberalization, the one and only POLR service provider is designated to be the incumbent distribution utility. Although only one supplier is designated as the POLR supplier, any retail marketer is allowed to offer the same terms as the POLR supplier. POLR service is provided for customers that do not select a retail marketer or have been dropped by their selected retail marketer. If POLR prices are set below costs, there are no incentives for retail marketers to enter or to continue offering service because customers will save money by staying with the POLR supplier. Effectively the POLR price acts as a rate cap unless the retail marketer is offering a differentiated product that can command a higher price.

40. We know of no examples to date in which cream skimming is at issue in POLR service. The POLR provider has always been viewed, as the name suggests, as the supplier for those who are not actively participating in the market.

41. As mentioned earlier, Maine is an exception with regard to entry incentives for retail marketers because it auctions off POLR service for different classes of customers in different areas of the state.[20] Some additional liberalizing states have begun to experiment with bidding out blocks of POLR customers to retail marketers other than the incumbent distribution utility.

42. An interesting exception to the practice of designating a POLR supplier occurred in the liberalization of natural gas retail sales in the state of Georgia. Under the original Georgia plan, no POLR service provider was designated by the state. Retail customers that did not select an independent retail marketer on their own were assigned one by the state in proportion to the number of customers who had voluntarily selected that retail marketer.[21]

Q: Definition of universal service. The precise definition of a universal service can often play a significant role in determining who can provide the universal service. Some definitions are physical, such as fixed line access to a general telephone network, and other definitions are conceptual, such as a service that allows for the connection of a user to the general telephone network from a fixed location. Sometimes definitions are enshrined in law, and difficult to change, and at other times they are enshrined in regulations, and easier to change. How are services defined B in physical or conceptual terms? Are efforts made to define services so that multiple companies could provide them?

43. Because the major subsidies in the electric power sector aimed specifically at low-income customers are funded explicitly (usually by excise charges), the definition of the obligation does not materially affect other aspects of these markets.

44. POLR service, on the other hand, materially affects other suppliers. However, it is the price for POLR service, rather than its definition, that has proven to be important.

Q: Selection of universal service provider. The provider of a universal service, such as public phone service, can be selected by legislation, by a regulator, or by a bidding process. Are there any other mechanisms that are used? Generally, how is the provider of a universal service selected? Is the selection based at a national level? Could the selection be based on a narrower geographic level? If the selection were based at a narrower level, would that increase the number of potential providers of the service?

45. Generally the selection of the POLR service provider is determined legislatively or by regulation on a state-by-state basis. In most cases, the POLR service provider is the incumbent distribution utility. Exceptions in Maine and some other liberalizing states were noted previously as was the unique practice in Georgia=s retail natural gas liberalization in which customers who failed to select a retail marketer were assigned to one.

Q: Separation of price from cost. It is often the case that the cost that varies the most between customers is the cost of building a connection to the customer, such as providing the line that carries electricity into a customer=s home. The cost of electricity itself may vary much less, once the initial connection has been made. Thus the distortions that arise from uniform pricing may be greater for the initial connection cost of a network service than for the ongoing provision of that service. Is the physical connection cost in the electricity and telephone industry related to the actual cost of building a connection to a customer? If so, can the customer seek bids from multiple builders of a physical connection, or is there only one provider? If rural customers are given preferential tariffs that do not reflect the cost of serving them, please explain why rural customers are given preference over urban customers.

46. Policies regarding charges for connecting individual customers to the distribution system vary from state to state. It is important to note that issues about cost of service differences between areas, including differences in average connection costs, have been addressed indirectly in the U.S. by having numerous suppliers each with a separate geographic service territory. Thus cost of service variations such as those caused by different average distances between homes in different service territories, result in different average rates reflecting these cost variations. Distribution system charges are fully regulated at the state level where the distribution firm is a regulated utility. In fact, retail rates vary widely between states and between areas within states.

47. In many rural areas, the distribution firm is a rural electric cooperative that establishes its own policies regarding connection charges. Most rural cooperatives have prohibitions against discrimination, but these have been interpreted to allow charging extra fees to customers with high-cost connections.[22]

48. Although much discussion about the USO and subsidies focuses on disproportionate benefits for rural customers, a reverse argument can be made regarding costs of transmission services. Concern has arisen in the U.S. that some rural areas located between large urban areas pay transmission costs that primarily benefit the urban areas that wheel power back and forth to each other over the lines paid for by rural customers.

49. In addition to having numerous geographically based suppliers, a number of other mechanisms exist that adjust connection and service charges to the differences in the costs of connection and service for different groups of customers within each distribution utility franchise area. For example, state utility commissions typically establish several classes of retail customers and the regulated rates within a given distribution area have traditionally varied between classes of customers based, in part, on differences in the costs of serving different types of customers in that area. The rate differences that are cost-based persist once distribution service is unbundled from energy charges.[23] However, within a class of customers, hook ups and service fees in developed areas are typically charged at a uniform rate.[24] Similarly, where units

within a large-scale new construction project are being connected to the distribution system, the developer of the property may be required to pay for some or all of the incremental costs to serve the development. The developer, in turn, passes on these costs in the sales prices of units in the new development.

Q: Benefits to provider of universal service. Does the provider of a universal service receive any explicit payment for the provision of that service? If so, how large are the payments? Must the universal service provider demonstrate that it provides the services at a non-commercial rate?

50. Where the POLR service provider is explicitly subsidizing consumption by low-income households, it generally receives payments to cover the costs of these subsidies from a fund established by the government for this purpose or it is allowed to include these costs in its rates. To the extent that there are implicit subsidies among rate classes, compensation is implicit in the setting of the price cap structure or revenue requirement. Retail marketers generally do not have a traditional utility=s obligation to serve.[25]

Q: On what basis are costs calculated for USO provision? Are the costs used historical? Are the costs forward-looking? Are models used to estimate the costs? Are these engineering models, as perhaps for telephone and electricity services? Are these process models, as might be appropriate for postal delivery? Is the objective to provided services of a predefined quality at the minimum price? How is the minimum established? Establishing the costs of efficient provision can be a particularly difficult problem with respect to labor inputs. How is the efficient labor cost calculated, if it is different from the actual labor cost?

51. The subsidies go to individual customers to help pay their electric power bills or to allow lower rates for these customers. The subsidy payments are for a set amount or are based on comparisons between the regulated rates charged for POLR service vs. the rate for low-income customers.

Q: Does the provider receive advantages from providing the universal service? How are benefits of universal service provision evaluated? Are the techniques for evaluating the advantages scientific?

52. Considerable debate has occurred regarding the interpretation that retail customers attach to POLR service that is provided by the incumbent distribution utility.[26] Some contend that customers view the POLR service as the same service that they received prior to the liberalization despite required disclosures indicating that the POLR supplier is an affiliate of the distribution utility and that the distribution utility is not allowed to discriminate against customers of independent marketers. ACustomer inertia@ stemming from these perceptions may work against customers selecting an independent retail marketer if the incumbent distribution utility had a positive reputation before liberalization. In most states, decision makers have not forced customers to select an independent retail marketer. Some have described a policy of requiring customers to pick an independent retail marketer as Agovernment slamming.@[27]

Financing (Electricity Sector)

Q: Are there any general government policies with respect to the financing of USO=s? Examples might include internal financing within the firm or financing through general taxation. When the cost of USO=s is calculated, are competitors required to participate in its financing? What mechanism is used to calculate the contribution of competitors? If market share is involved, how is each market participant share calculated?

53. In the electricity sector, liberalization has generally resulted in greater transparency regarding subsidies for low-income customers. Remaining subsidy programs are generally financed though excise taxes on electricity consumption that apply to sales by all retail suppliers.

54. POLR service rates are regulated rates based either on legislative determinations of the price (i.e., 10% less than the regulated rate prior to liberalization) or an updated cost-based determination.[28] Where the POLR rate has fallen below wholesale costs, POLR suppliers have often sought to increase the POLR rates. Such efforts have met with mixed responses from regulators and legislators.

Q: If the universal service provider receives a payment, how is the decision made of whether a universal service will be paid for through general taxation or taxes on users of related services?

55. Because subsidies for low-income customers were previously imbedded in the regulated rates, there has been a general assumption that these programs will continue to be paid for by taxes on electricity consumption or by charitable giving.

Q: For universal services that are paid for by general taxes, are the costs of rural customers USO obligations paid by the federal government, regional or local authorities? Might it be more efficient to allow the local authorities to choose (and subsidize) the level of services than for the federal authorities to do this? Why or why not? What are the problems with local authority payment? What are the benefits?

56. Subsidies and payment approaches are determined at the state level, since retail electricity prices are within the jurisdiction of the states. States may allow cities or counties to make separate decisions in this regard. Federal subsidies on loans to rural cooperatives are paid from federal funds. One argument in favor of federal decision- making about these subsidies is that the federal government should be able to channel funds to areas with the greatest positive externalities, thus creating the maximum social benefit for any given level of subsidy level. In part, the evaluation on this topic depends upon whether the subsidies are arbitrary redistributions of income or internalizations of positive externalities.

Q: For universal services that are not paid for by general taxes, is internal cross-subsidization a preferred solution for financing universal service? If so, why? Is such a program justified? Would the costs of providing a service with different prices outweigh the benefits?

57. Although costs have been an input into state decisions about rates for different classes of customers, some observers have found that cross-subsidization across customer classes has taken place in some states or that economically inefficient relative markups across customer classes distorted consumption decisions. Often the direction of cross-subsidization is from commercial and industrial customers to residential customers. The extent to which this constitutes a financing of true universal service, rather than a general redistribution policy, is unclear. Liberalization has generally made such cross-subsidization policies more transparent in the electric power sector because under liberalization, retail marketers generally do not try to charge different rates to similarly situated customers for the energy component of the bill. As a result, a policy that preserves the same amount of discrimination between classes of customers in aggregate, but does so only on the unbundled distribution portion of the bill, will show very large percentage disparities in distribution rates.

58. Averaging of costs across horizontally similar customers can also result in price discrimination (charging equal prices for services whose costs differ). Such cost averaging can be efficient, however, if the costs of exactly determining the costs of serving specific customers are themselves high.

Q: For services that are subsidized by taxes on users of related services, how are the related services chosen? Is the harm to consumers of related services (through increased taxation and reduced consumption) compared to the benefits for the users of the universal service?

59. So far, the only related services that may be taxed are those that have traditionally been included in electricity billing statements (e.g. generation, transmission, distribution, marketing, billing), albeit the

charges for these related services now appear as separate lines. The economic efficiency impacts of such programs typically are not quantitatively considered.

Q: In some industries, there may be substantial capital investment involved in providing a universal service, especially if physical connections must be built to individual users, as with fixed telephone service and electricity connections. In contrast, in some other industries, such as mail delivery, capital investment may be less critical as an issue. If the universal service provider for an existing service in a given geographic area is changed, what is the appropriate way to deal with stranded capital investment?

60. All of the connection issues in the electricity sector relate to aspects of the industry that continue to be fully regulated. In this context, changing the POLR provider or the subsidies for low-income customers does not create a stranded cost problem in general.

61. The stranded cost problems arose from liberalization itself. Many vertically integrated utilities undertook generation investments and signed generation contracts, with the approval of or at the request of regulators, that would not be economical once competition came to these markets. These uneconomic investments and contracts were the source of the large stranded costs in the electric power sector.

Q: Role of competition authority. USOs often create entry barriers or payments from new entrants to incumbents. As a result, such obligations can have a significant impact on competition and the efficient provision of services and some observers might argue that competition authorities should be involved, in at least an advisory capacity, on government decisions related to the provision of universal service obligations. What is your view on the appropriate role of a competition authority with respect to USOs?

62. The actual role of competition authorities is generally restricted to competition advocacy in the U.S. electric power sector either because the federal sector regulator has jurisdiction or because state decisions that constitute active regulation of an industry are not subject to the antitrust laws.[29] Given that so many of the critical decisions in this sector are taken at the state level, it is difficult to envision a greater direct role for the competition authorities in the U.S. until the transition to competitive markets progresses further.

USO=s are frequently used as a justification for otherwise abusive behavior by incumbent operators. Is there any antitrust case in your jurisdiction where the competition authority has accepted/not accepted that argument? Please describe your main cases.

63. We know of no relevant cases of this type in the electric power sector.

Industry-Specific Questions (Electricity Sector)

Q: Electricity. Is there a uniform price for building a new physical connection to the customer? Is there a uniform price for electricity across regions with different costs? Can anyone besides the electricity transmission company build such a connection? Is distributed generation encouraged when it is economically reasonable?

64. Policies about charges for new physical connections differ by state and remain fully regulated. Pricing policies for electricity vary across the country. At the wholesale level, prices typically include both an energy charge and a transmission charge. As a result, differences in generation and transmission charges are generally reflected in prices. Efforts have been undertaken by the Federal Energy Regulatory Commission (FERC) to refine wholesale prices to better reflect the transmission congestion costs. There is an increasing acceptance of locational marginal pricing for transmission.[30]

65. Retail rates differ by service territory. In states where the retail rates are bundled and regulated, the rates reflect average costs in the area served by a particular retail distribution utility. Under traditional regulation, historic costs over a year or more are averaged to determine regulated rates in the electricity sector for the next time period. Sometimes there is a fuel price adjustment clause that allows more frequent adjustments to rates. The costs considered in bundled rates include generation, distribution, transmission, billing, and marketing. The range of average retail prices in different states is considerable ranging from slightly more than $0.04 per kilowatt hour (Idaho) to over $0.14 per kilowatt hour (Hawaii).[31] In states where the retail rates have been liberalized, retail marketers are allowed to charge rates that reflect their costs and the extent of retail competition; however, in many states the POLR price acts as a de facto cap on prices for all marketers. As described earlier, the POLR prices were at or below average wholesale prices for much of the past three years. Once POLR service is no longer offered or once POLR prices have been adjusted to reflect the costs of POLR service, competition between retail marketers will determine retail prices in the liberalized states.

66. FERC proposes to give merchant transmission projects a prominent role in efforts to increase transmission investment. To date, only a few such projects have been started or proposed. Efforts to undertake merchant transmission projects may be inhibited by difficulties in obtaining siting authority for such projects. Further, the potential use of eminent domain power to obtain land for merchant transmission projects is unclear. Without eminent domain authority, the costs of merchant transmission projects may be greater than those for the same project conducted by a distribution utility using eminent domain authority.

67. Distributed generation connections to the grid or distribution system have been the subject of intense regulatory reform efforts in recent years. Both FERC and the states are working to standardize interconnection procedures for DG. These efforts recently were boosted by issuance of an IEEE standard for connecting small DG units to the distribution system. A remaining issue is the pricing of retail backup service for customers with DG units. Advocates of DG argue that back up services have been priced too high because these prices may not adequately reflect the statistical unlikeliness of simultaneous reliability problems among DG units.

IV. Postal Services

Postal Sector Background Notes

68. From the Revolutionary War period until 1970, the United States Post Office, the predecessor to the United States Postal Service (USPS), was a cabinet level department of the U.S. government. After 1970 it became an independent establishment of the executive branch charged with financing its own operations and providing postal services to the nation in a business-like manner. The 1970 reforms were enacted in an effort to improve the efficiency of the USPS, facilitate better relations between the USPS and labor unions, and reduce the influence of politics in the provision of postal services. The USPS's nine Governors are appointed by the President with the consent of the Senate. The USPS submits proposed rate changes to an independent Postal Rate Commission (PRC). Members of the PRC are also appointed by the President with the consent of the Senate. Rate changes must be recommended by the PRC, except that by a unanimous vote of the Governors upon finding that the PRC recommendation does not meet the financial needs of the Postal Service, a PRC-recommended decision can be modified to ensure that the statutory break-even requirement is met. The regulatory powers of the PRC are quite limited. It does not generally have authority to question the efficiency of USPS operations; however, it is responsible for issuing advisory opinions on nationwide changes in service. Its primary responsibility is to recommend the prices for different classes of mail. In addition, the USPS's Office of the Inspector General conducts prudency reviews of USPS operations and reports its results to the Board of Governors as well as to the US Congress.

69. The universal service obligation (USO) of the USPS requires that the Postal Service shall provide prompt, reliable, and efficient services to patrons in all areas and shall render postal services to all communities.[32] Congress has also mandated that the Postal Service serve as nearly as practicable the entire population of the United States.[33] Further, the Postal Service is obligated to maintain a maximum degree of postal services to "rural areas, communities, and small towns where post offices are not self-sustaining."[34] To protect small communities from large-scale closings or consolidations of post offices, US federal law stipulates that small post offices cannot be closed "solely for operating at a deficit." If the Postal Service seeks to close an office, it must provide advance notice to customers and its decision to close the office is subject to appeal to the PRC.[35] Federal law also requires that the Postal Service provide at least one class of mail for letters for which the rate "shall be uniform" throughout the United States.[36] [37]

70. The USPS is a large enterprise with 2002 revenues in excess of $66 billion, deliveries in excess of 200 billion pieces, more than 38,000 retail outlets and roughly 730,000 career employees. Almost half of the pieces are First-Class Mail. More that two-thirds of Postal Service expenses are personnel compensation or benefits.[38]

71. During the past three years, the USPS has experienced financial difficulties. The most recent rate increase was in excess of inflation.[39] Evaluations of these financial difficulties have emphasized three factors. First, USPS labor costs are above market levels and USPS productivity gains have been lower than those in the private sector. Second, demand for First-Class Mail (FCM), the class with one of the highest contributions, is eroding. The USPS projects that as much as 25% of First-Class Mail volume may be lost before the end of the decade. Much of this erosion stems from the increasing use of the Internet.[40] Third, the downturn in the economy and higher security costs facing the USPS since September 11, 2001, have combined to undermine USPS finances.

72. On July 31, 2003, the President's Commission on the United States Postal Service delivered a report and recommendations regarding the future of the USPS.[41] Although this report did not recommend privatization of the USPS or alteration of the six-day-per-week delivery, it did recommend strong regulation, efficiency incentives and stronger oversight that may improve USPS finances.

Responses to Questions (Postal Sector)

Q: Please list the primary telecommunications, post, transport and electricity services that are covered by non-commercial service obligations.

73. US federal law states that the USPS is to receive, transmit, and deliver written and printed matter, parcels, and like materials. As a practical matter, the USO comprises First-Class Mail (consisting mostly of letters), Periodicals (consisting mostly of magazines and newspapers), Standard Mail (consisting mostly of direct mail), Package Services (consisting mostly of parcels), and Express Mail (an expedited, guaranteed service). While the USO is interpreted as applying broadly to all mailed material, the Private Express Statutes, which regulate the Postal Service's monopoly, do not apply to Periodicals, Package Services, and small portions of First-Class Mail and Standard Mail. In addition, the Postal Service has voluntarily suspended the application of the Private Express Statutes to extremely urgent letters and outbound international mail.[42]

Q: Are there any general government policies towards USOs? … What services are currently being considered as potential universal service obligations?

74. The Postal Reorganization Act (PRA) imposes several obligations upon the Postal Service. Foremost among these are universal service obligations; however, several other social policy obligations are also imposed upon the Postal Service.

75. The PRA requires that the Postal Service "shall provide prompt, reliable, and efficient services to patrons in all areas and shall render postal services to all communities."[43] Congress has also directed that "[t]he Postal Service shall serve as nearly as practicable the entire population of the United States."[44] Further, the Postal Service is obligated to maintain a maximum degree of postal services to "rural areas, communities, and small towns where post offices are not self-sustaining."[45] To protect small communities from large-scale closings or consolidations of post offices, the Act stipulates that small post offices cannot be closed "solely for operating at a deficit."[46] If the Postal Service seeks to close an office, it must provide advance notice to customers and its decision to close the office is subject to appeal to the PRC.[47]

76. The PRA also requires that the Postal Service provide a basic letter service at a uniform rate. In particular, the Postal Service must maintain at least one class of mail for letters for which the rate "shall be uniform" throughout the United States.[48] The Postal Service offers a uniform domestic First-Class Mail rate for all mailable articles, currently $0.37 USD for the first ounce (approximately 28.4 grams), regardless of distance. Uniform rates for First-Class Mail are available for articles weighing 1 pound (0.454 kg.) or less; for articles weighing in excess of 1 pound, the First-Class Mail postage rates become distance-related up through 70 pounds (31.8 kg.).

77. The Postal Reorganization Act does not quantitatively address the issue of frequency of mail delivery service. Nevertheless, in response to concerns raised in the early 1980s that the Postal Service might deviate from long-standing policies, annual postal appropriations bills since that time routinely have required that six-day-a-week delivery continue at not less than the 1983 level.

78. Other obligations imposed upon the Postal Service are designed to achieve social policy objectives. The PRA establishes that the Postal Service must offer qualified nonprofit organizations reduced rates for mailing advertising matter, periodicals, and newspapers. Books, educational materials, sound recordings, and films must be carried at uniform rates.[49] Library Mail is also entitled to preferred rates. In addition, the Act entitles blind persons and certain members of the armed forces to mail articles free of charge.[50] The PRA further directs the PRC to consider the educational, cultural, social, and informational value ("ECSI value") of the mail in setting overhead cost assignments for purposes of rate recommendations.[51] As a consequence, mail matter having a high "ECSI value", such as Periodicals, has traditionally received relatively low overhead cost burdens, which have contributed to favorable rates for Periodicals.

79. The USPS has other social obligations as well. For example, in recent years, Congress has directed the Postal Service to issue additional "semipostal" stamps[52] with all revenue earned through sale of these semipostal stamps exceeding the current First-Class Mail, first-ounce postage rate being donated to other governmental institutions for benefiting various charitable causes, including breast cancer research, elimination of domestic violence, and the families of 9/11 emergency services personnel. The USPS also offers other governmental services, such as passport applications and selective service registration, and must satisfy certain social policies in procurement and other contexts.

Q: Have non-commercial service obligations impacted efforts at liberalization? Please discuss how, in liberalizing industries, USOs have been met.

80. The USO has been cited as one of several issues to consider in connection with liberalizing the postal sector in the United States. To date, there has been no consensus on the costs of the USO, or on modifications to the USO that would reduce its costs. However, notwithstanding the USO and the Private Express Statutes, the rate policy of the Postal Service and the Postal Rate Commission has resulted in substantial liberalization of the U.S. postal market. Under the worksharing program, rate incentives are provided for customers (on their own behalf or through third-parties) to prepare, sort, and transport mail

closer to its ultimate destination. This program has resulted in the effective privatization of approximately $15 billion of the postal market.

Q: Have non-commercial service obligations changed with privatization? Please discuss the role of privatization in the definition and financing of USO=s.

81. "Privatization" has not occurred explicitly in the postal sector. Several developments have been of interest, however. First, in 1979, the Postal Service promulgated suspensions to enforcement of the general provisions of the Private Express Statutes (PES)[53] thereby allowing private carriage of "extremely urgent" letters.[54] This suspension opened the expedited document delivery market to private competitors. As a result, private suppliers have reduced the share of the expedited service market supplied by the USPS. United Parcel Service and Federal Express are two of the most prominent suppliers that displaced the USPS in this segment of mail service. Second, private companies have expanded their share of package delivery, which was never covered by the Private Express Statutes.[55] Third, the USPS workshare program is arguably one of the most significant forms of "quiet" liberalization in the world.[56] Worksharing is an extensive program allowing discounts to customers that perform certain functions that the USPS would otherwise have to perform.[57] Numerous major customers obtain rate incentives or worksharing discounts by pre-sorting their mail and delivering the pre-sorted mail to USPS processing centers. The USPS has a limited program of contracting out for delivery services in rural areas.[58] Worksharing has taken place with very little political controversy because it did not fundamentally affect the USO. A very large portion of total mail volume is eligible for one or more workshare discounts. Worksharing has not directly affected the USO.

Q: Deciding to make a service a USO. Please explain factors that are considered for deciding whether a service should be a universal service obligation. Are these designations reviewed on a regular basis? If not, why not?

82. Unlike the Private Express Statutes, the universal service obligation is not explicitly defined in law. Therefore, there is no explicit process by which a service is determined to be part of the universal service obligation; however, federal law establishes procedures for evaluation of a change in the definition of domestic mail services, whether competitive or non-competitive.[59] These procedures also apply to new services, and to new rate categories within a subclass.

State whether universal service access is also considered as an option. For example, with Internet service, a user can go to an Internet café to access the network or stay at home. Staying at home requires access to a computer, which many disadvantaged consumers do not have. Thus universal service access may be preferred, through sharing of common facilities.

83. Yes, as explained above, universal service access is considered to be part of the USO in the U.S. For example, federal law requires the USPS to offer a maximum degree of effective and regular postal services to rural areas, communities, and small towns where post offices are not self-sustaining, and limits the USPS's ability to close or consolidate unprofitable post offices.

Evidence of underprovision. Please state whether there is any evidence that, without USOs, a service would be underprovided and that many people would not choose to purchase the service. What sort of evidence is required to show that an individual service should be subsidized via a USO? Are the subsidies general or targeted at the desired user group that would not receive the service?

84. This question raises the broader question of identifying the relevant market in which to consider the postal USO. Often, postal services are considered to be synonymous with long-distance communication services; however, significant portions of the mail stream provide services (e.g., bill

presentment and payment) within a local area. Today, it appears that postal services may represent a shrinking share of communication services in part due to the rapid growth of electronic messaging which, to some extent, displaces postal services but to a greater extent may represent messages that otherwise would not have been sent. Despite these long-term trends, the USO for postal services continues to be evaluated in isolation. Historically, the major role of postal services in communication may have given postal services a major role in economic and regional development, cultural integration, and national security policies as well. These linkages from postal services to broader policy objectives appear to be attenuated as well.

85. Under current statutes, rates for each mail subclass cover attributable costs and provide for a reasonable contribution (as determined by the PRC) to the overhead costs of the Postal Service. A limited number of exceptions, established by federal law, provide for subsidies through federal government reimbursement for the postage due for specified categories, including designated overseas voting materials, mailings for the blind, mail sent by members of the armed services, and government mail. Federal reimbursement of these costs is designed to prevent having the costs of such mail being borne by other users through their postal rates.

Q: Entry barriers. Does establishing a USO occur in conjunction with entry restrictions that exclude competitors from part or all of a market? Is the argument based on cream-skimming concerns? If so, is any evidence required that, in the presence of cream-skimming, total industry costs will increase significantly? Are entry barriers less appropriate if an industry is operating inefficiently?

86. A combination of criminal and civil statutes and Postal Service implementing regulations address private carriage. In general, the Private Express Statutes (PES)[60] make it unlawful for any entity other than the Postal Service to send or carry letters[61] over post routes[62] for compensation *unless* postage on the matter carried by private carrier is paid in an amount equivalent to the applicable postage, or the carriage qualifies for an exception[63] or suspension. Thus, private carriage of letters is not prohibited, although, in most circumstances, the PES make private carriage of non-urgent letters economically disadvantageous. For all items, including those that are not considered letters, such as *merchandise, newspapers,* and *periodicals,* private carriers may accept and deliver such items, except that, under a provision known as "the mailbox rule,"[64] delivery must be effected through means that do not involve access to mailboxes or post office boxes in Postal Service retail units.

87. Concern about "cream-skimming" has arisen in evaluating the universal service obligation.[65] A major concern is that entrants would compete only on high-profit routes leaving the USPS to serve the unprofitable routes. Under some conditions this could lead to a downward spiral for the USPS in which it would have to raise rates to cover costs, which in turn would cause additional entry, leading to higher rates, etc. Other observers have concluded that opening the system would have little impact on the USPS.[66] Less concern has been expressed about entrants that would offer less frequent deliveries or other forms of lower quality/lower cost service. Some recent comments have also focused on privacy and security concerns about postal competition because it would increase the number of persons with a legal rationale to access public and private buildings.

Q: Definition of universal service. The precise definition of a universal service can often play a significant role in determining who can provide the universal service. Some definitions are physical, such as fixed line access to a general telephone network, and other definitions are conceptual, such as a service that allows for the connection of a user to the general telephone network from a fixed location. Sometimes definitions are enshrined in law, and difficult to change, and at other times they are enshrined in regulations, and easier to change. How are services defined B in physical or conceptual terms? Are efforts made to define services so that multiple companies could provide them?

88. As explained above, the USO is not explicitly defined in federal law. US federal law states that the USPS is to receive, transmit, and deliver written and printed matter, parcels, and like materials. While other companies can and do provide services to most parts of the nation, as a practical matter, US federal law contemplates that a single universal service supplier will provide non-expedited letter services. The basis for the postal monopoly is the Private Express Statutes, but in some cases the USPS has promulgated regulations suspending their operation. The suspensions to the monopoly are stated in terms of content (data processing materials), origin (colleges and university letters), destination (outbound international mail), incidental nature (advertisements with parcels or periodicals), and extreme urgency (extremely urgent letters). The US President's Commission has recommended that the Postal Service not have the authority to alter the scope of the mail monopoly.

Q: Selection of universal service provider. The provider of a universal service, such as public phone service, can be selected by legislation, by a regulator, or by a bidding process. Are there any other mechanisms that are used? Generally, how is the provider of a universal service selected? Is the selection based at a national level? Could the selection be based on a narrower geographic level? If the selection were based at a narrower level, would that increase the number of potential providers of the service?

89. In postal services, the Postal Service (and its predecessor, the Post Office Department) have been in place since before the ratification of the Constitution. Switching providers has never been seriously considered outside of narrowing the monopoly, worksharing, and contracting out as discussed above.

Q: Separation of price from cost. It is often the case that the cost that varies the most between customers is the cost of building a connection to the customer, such as providing the line that carries electricity into a customer=s home. The cost of electricity itself may vary much less, once the initial connection has been made. Thus the distortions that arise from uniform pricing may be greater for the initial connection cost of a network service than for the ongoing provision of that service. Is the physical connection cost in the electricity and telephone industry related to the actual cost of building a connection to a customer? If so, can the customer seek bids from multiple builders of a physical connection, or is there only one provider? If rural customers are given preferential tariffs that do not reflect the cost of serving them, please explain why rural customers are given preference over urban customers.

90. Several studies of USPS costs at the route level indicate that the gap between the profitability of urban routes and the unprofitability of rural routes has largely disappeared due to suburbanization (rural routes have become denser) and to cost-effective contracting out of some rural delivery routes.[67] Recent research also suggests that the distribution of route profitabilities is quite skewed.[68] There are relatively few routes that either are highly profitable or highly unprofitable. The implications of this finding are discussed in more detail in the section on cream skimming below.

91. Other studies have shown that lower income routes tend to receive less mail, raising the cost per piece and rendering such routes more likely to be lossmakers that would not be served without a USO.[69]

Q: Benefits to provider of universal service. Does the provider of a universal service receive any explicit payment for the provision of that service? If so, how large are the payments? Must the universal service provider demonstrate that it provides the services at a non-commercial rate?

92. The USPS is charged with being financially self-sufficient.[70] Therefore, sufficient revenues must be earned on mail services in higher-return segments to cover the costs of providing relatively higher-cost services within the same subclass. Under current statutes, each subclass, in total, covers the total cost of providing this service plus a reasonable contribution to the overhead costs of the Postal Service. The Postal Service is not reimbursed by the government or private carriers for maintenance of universal services; rather, the total revenue of the Postal Service from the various classes of mail is required to provide sufficient revenues to cover the total costs of providing universal postal services to the entire nation. Payments for certain services, including mail for the blind, overseas voting materials, etc. are subsidized with tax revenues, however these are a very small portion of overall revenue. Rates for all services at the subclass level are established to fully cover their attributable costs, but contributions toward covering joint and common costs vary between classes of mail. The varying contributions to overhead costs are, in part, the result of the PRC's evaluation and application of the non-cost pricing criteria of the Postal Reorganization Act. First-Class Mail, which is largely covered by the Private Express Statutes, has historically shouldered a higher-than-average contribution to institutional costs relative to other classes. Under existing USPS ratemaking practice, more than 35% of total costs are institutional costs (joint or common costs) not attributable to a particular class of service.[71] This implies that scope economies are substantial.

Q: On what basis are costs calculated for USO provision? Are the costs used historical? Are the costs forward-looking? Are models used to estimate the costs? Are these engineering models, as perhaps for telephone and electricity services? Are these process models, as might be appropriate for postal delivery? Is the objective to provided services of a predefined quality at the minimum price? How is the minimum established? Establishing the costs of efficient provision can be a particularly difficult problem with respect to labor inputs. How is the efficient labor cost calculated, if it is different from the actual labor cost?

93. While no official measure exists for the cost of the USO, various researchers have studied this topic and some have provided estimates.[72] Prices for domestic postal services are established according to a complex procedure specified by the Postal Reorganization Act (PRA).[73] Every rate for each domestic postal service, regardless of the level of competition or whether it is subject to the statutory monopoly, is subject to this process. U.S. courts have interpreted this requirement to apply to all domestic postal services, including experimental services of temporary duration, as well as special services that are ancillary to the collection and delivery of mail, such as postal insurance and registered mail.[74] The ratesetting process is designed to permit the participation of the public in the establishment of domestic rates. When the Postal Service determines that changes in rates for domestic postal services are necessary, it must first request the PRC to provide a recommended decision. The PRC is required to prepare recommendations on the Postal Service's request, after first providing an opportunity for a hearing on the record to members of the public. Typically, customers -- both large and small, industry associations, labor unions, postal competitors, and individuals on their own behalf -- participate in these proceedings. Trial-type administrative proceedings typically consist of written expert testimony as well as oral and written cross-examination of Postal Service, customer, and competitor witnesses. Under the Postal Reorganization Act, an officer of the PRC (today known as the Office of Consumer Advocate) is responsible for representing the interests of the general public in rate and classification proceedings.

94. The Postal Service's revenue requirement, and consequently rates, are based on a thorough examination of the projected costs, including the expected labor costs for a representative year. Rates are designed to meet the statutory "break-even" requirement in this year. While the revenue requirement and consequently rates are based on estimates of actual costs (not hypothetical "efficient" costs) all expected cost-efficiencies and productivity improvements are incorporated into cost estimates.

95. The PRC must deliver its recommendations to the nine Presidentially-appointed Governors of the Postal Service within ten months of the initial Request. The Governors are responsible for establishing postal rates and fees, although their authority to make changes to the Commission's recommendations is significantly restricted.[75] Upon receipt of a recommended decision from the PRC, the Governors have several options.[76] They may approve it and place it into effect. They may allow it to take effect under protest and either seek judicial review or return it to the PRC for reconsideration. They may also reject the Recommended Decision. The latter option preserves the *status quo* unless and until further recommendations are requested by the Postal Service, made by the PRC and acted upon by the Governors. Under certain limited circumstances, the Governors may modify a Recommended Decision of the Postal Rate Commission.

96. The USPS makes elaborate econometric modeling presentations to the PRC during each set of rate hearings. The data sets are developed from historical data assembled by the USPS. Projections based on historical information are included in the USPS's presentations.[77]

97. The USPS sets delivery standards (speed of service) that are measured by the USPS.[78] Compliance with delivery standards is subject to legislative oversight.[79] Suggestions by the USPS that six-day service be reduced to five-day service have aroused strong objections in Congress. Similarly, USPS suggestions that unprofitable post offices be closed have resulted in legislative requirements that impede such closures.

Q: Does the provider receive advantages from providing the universal service? How are benefits of universal service provision evaluated? Are the techniques for evaluating the advantages scientific?

98. Because of its status as a federal governmental entity, the Postal Service has certain powers, privileges, and immunities that are not shared by other private sector firms. The Postal Service is not subject to federal or state income taxation, and revenue and gross receipts taxes are not imposed upon the operations of the Postal Service. In most contexts, the Postal Service is not liable for state and local sales taxes imposed on the buyer when it purchases goods and services, although the Postal Service's suppliers may be subject to, and be liable for, gross receipts taxes which are imposed on them. Items sold through postal outlets are not subject to sales taxes. In general, the Postal Service is not subject to local zoning ordinances. The Postal Service may also acquire real estate and intellectual property through the power of eminent domain, but if it does so, it must provide compensation to the owner. As a federal institution, the Postal Service is immunized from certain types of civil actions. For instance, the Postal Service is not liable for misdelivery or loss of uninsured mail or for various intentional torts, such as libel, slander, misrepresentation, or intentional interference with contractual rights.[80] Some courts have, however, held the Postal Service to commercial standards in specific contexts.[81]

99. There has been considerable debate concerning the scope and extent of the Postal Service's powers, privileges, and immunities. Some observers have argued in favor of a "level playing field," at least with respect to services provided in competition with the private sector. Despite the powers and advantages of the Postal Service, the Postal Service has responded to these arguments by pointing out that it is subject to many universal service obligations and regulatory controls that do not apply to private sector firms.

100. Commercial advantages that would attach to the provider of universal service if entry restrictions were removed is among the major issues involved in current policy debates regarding the USPS. Since there have been no pilot programs and the promotional efforts of entrants or the USPS under these circumstances are unknown, evaluation is necessarily limited.

Financing (Postal Sector)

Q: Are there any general government policies with respect to the financing of USOs? Examples might include internal financing within the firm or financing through general taxation. When the cost of USOs is calculated, are competitors required to participate in its financing? What mechanism is used to calculate the contribution of competitors? If market share is involved, how is each market participant share calculated?

101. The government policy for financing the postal USO is through the operator's self-sufficiency, but with allowance for limited borrowing from the government during deficit years between rate cases. There is no compensation fund obligating private carriers to support universal service in the United States.

Q: If the universal service provider receives a payment, how is the decision made on whether a universal service will be paid for through general taxation or taxes on users of related services?

102. The explicit subsidies for subsidized mail services, such as mail for the blind and overseas voting materials, are relatively small. The USPS submits information to the administration and to Congress about the costs of funding these mail services. The subsidies may or may not cover the full costs.[82]

Q: For universal services that are paid for by general taxes, are the costs of rural customers USO obligations paid by the federal government, regional or local authorities? Might it be more efficient to allow the local authorities to choose (and subsidize) the level of services than for the federal authorities to do this? Why or why not? What are the problems with local authority payment? What are the benefits?

103. Not generally applicable. There are precedents in transportation services, for example, for local governments to subsidize or reorganize services that suppliers no longer wish to provide once a USO is relaxed by the regulator or legislators. If the USPS were allowed to close unprofitable post offices, for example, state or local governments could be offered an opportunity to subsidize or reorganize these offices, perhaps adapting prices or service standards to local demand and cost conditions. The 2003 Presidential Commission recommended that A[i]f there is no adequate market demand for the purchase of a >low activity= post office, the USPS should consider transferring the site to state or local governments or nonprofit organizations, with or without reimbursement, as best serves the public interest.@ This may include the possibility of continuing to operate the facility as a public mailing center.

Q: For universal services that are not paid for by general taxes, is internal cross-subsidization a preferred solution for financing universal service? If so, why? Is such a program justified? Would the costs of providing a service with different prices outweigh the benefits?

104. By law, revenues from each class of mail service must equal or exceed any costs that are attributable specifically to that class. Once this has been achieved, there are still many joint and common costs that must be covered in the aggregate. Under past and existing rates, different percentage markups are assigned to classes of mail. The rates charged for classes of mail, such as First-Class Mail, are uniform. Within any class of mail, there may be limited instances where revenues do not cover attributable costs or make only a minimal contribution to covering joint and common costs, even though nation-wide the applicable rates for the class result in covering attributable costs. The converse may also be true.

105. Each Postal Service product covers its incremental cost. Cross subsidization takes the form of providing a full menu of services to low volume, high cost areas. Because the USO cost does not arise as the result of a fixed physical network, as in telecommunications, it would be difficult and expensive to both identify the areas receiving the cross subsidy and to measure the size of the cross subsidy for each area. Thus, use of an internal cross subsidy would seem to be efficient.

106. Under the current statute, cross-subsidization is not permitted between postal subclasses. Each subclass of mail must cover its attributable costs and provide reasonable contribution to overhead costs. This contribution is determined by the PRC in its application of the statutory pricing criteria under 39 USC 3622(b).

107. Among other analyses, the USPS has urged the PRC to consider, along with the many other ratemaking factors, Ramsey pricing principles[83] in setting postal rates for different classes of mail as well as other factors that lead to deviations from Ramsey prices. Under Ramsey pricing, the highest price-cost margins are applied to the customers with the least elastic demand. The rationale for this approach is that it minimizes the dead-weight loss from price discrimination between classes of mail. It does so because when demand is inelastic, higher prices and price/cost margins cause less decline in consumption and therefore less distortion in consumption decisions.[84] In general, the monopolized classes of mail have the least elastic demand. Demand for USPS services that face competition from private suppliers tends to be more elastic (since for these classes, the demand faced by the USPS is a residual demand rather than the full market demand). The PRC, however, insists that it places no reliance on Ramsey pricing for its recommended rates."[85] Nevertheless, the PRC does rely on own-price elasticities in setting rates, and monopolized classes of mail cover a substantial majority of the joint and common costs of the USPS.

Q: For services that are subsidized by taxes on users of related services, how are the related services chosen? Is the harm to consumers of related services (through increased taxation and reduced consumption) compared to the benefits for the users of the universal service?

108. See the discussion of Ramsey pricing.

109. There are no taxes on users, and under the current statutory pricing requirement, cross-subsidies are not permitted. To the extent that the phrase “subsidized by taxes on users of related services” is intended to encompass situations in which some subclasses receive higher versus lower markups over marginal costs than other subclasses, as indicated in the discussion of Ramsey pricing, the USPS has advocated that Ramsey pricing principles and models explicitly be applied for these purposes, but the PRC has declined to do so.

Q: In some industries, there may be substantial capital investment involved in providing a universal service, especially if physical connections must be built to individual users, as with fixed telephone service and electricity connections. In contrast, in some other industries, such as mail delivery, capital investment may be less critical as an issue. If the universal service provider for an existing service in a given geographic area is changed, what is the appropriate way to deal with stranded capital investment?

110. In general, this issue does not arise in postal services except with respect to continuing to operate post offices that are unprofitable. Most postal assets are mobile (trucks) or have alternative uses (real estate). If the retail services of the USPS were transferred to another provider with the existing legislative restrictions on closing post offices, the assets would presumably have to be transferred to the new provider as well.

Q: Role of competition authority. USOs often create entry barriers or payments from new entrants to incumbents. As a result, such obligations can have a significant impact on competition and the efficient provision of services and some observers might argue that competition authorities should be involved, in at least an advisory capacity, on government decisions related to the provision of universal service obligations. What is your view on the appropriate role of a competition authority with respect to USOs?

111. The role of competition authorities is generally restricted to competition advocacy with some informal law enforcement activities regarding advertising by the USPS. Reform proposals regarding the USPS routinely include provisions that would make the USPS explicitly subject to the antitrust laws[86] and that would strengthen the oversight that is now provided by the PRC.

Q: USOs are frequently used as a justification for otherwise abusive behavior by incumbent operators. Is there any antitrust case in your jurisdiction where the competition authority has accepted/not accepted that argument? Please describe your main cases.

112. Allegations of abusive behavior with respect to enforcement of the Private Express Statutes occur from time to time, but antitrust jurisdiction over the USPS is currently the subject of a legal challenge. The major private competitors of the USPS (Federal Express and United Parcel Service, for example) make their views known in the legislative oversight process and through participation in PRC rate proceedings. The Presidentially appointed Governors also direct the behavior of the USPS for the benefit of the public interest generally, rather than the USPS itself.[87]

Industry Specific Questions (Postal Sector)

Q: Post. Why should mailboxes not be deliverable by package delivery companies, if those companies provide a reimbursement to the postal service?

113. Technically, private carriers may deliver to mailboxes as long as the applicable postage is paid.[88] This is, however, generally regarded as a prohibitive price.[89] The FTC staff proposed to the PRC that private delivery services be allowed to put mail in mailboxes if the private delivery service paid a fee equivalent to the lost contribution margin that the USPS would have earned on that delivery.[90] The rationale for charging a fee at this level is that it would, on average, avoid cream skimming effects and a graveyard spiral at the USPS.[91] USPS user groups viewed such fees as too cost-prohibitive for would-be entrants.[92]

114. Surveys of the American public indicate widespread support for limiting access to mailboxes. A GAO survey several years ago estimated that the vast majority of adults (82 percent) are opposed to allowing "any individual person" to put items in mailboxes;[93] however, fifty-eight percent of respondents indicated that express mail companies such as UPS and FedEx should be allowed to put items in mailboxes. Some commenters support the USPS mailbox monopoly because they believe that it discourages criminal trespassing by limiting the number of entities that are authorized to access private property.

V. Telecommunications

Overview of Universal Service Obligations in Telecommunications Sector

115. Prior to passage of the 1996 Telecommunications Act, which called for putting in place procedures that increased entry of competitors into both local and long-distance (interstate) telephone markets, universal service consisted mostly of implicit subsidies flowing between classes of telephone customers. Universal service prior to 1996 generally meant that basic telephone service should be

available to all citizens at reasonable prices. These twin goals of ubiquity and affordability, however, evolved over time. As early as the beginning of the twentieth century, AT&T, then an emerging monopolist, advocated that a single integrated telephone network should serve the entire nation.[94] Critics argued that AT&T desired to promote industry consolidation and thwart independent rivals. This policy changed during the 1970s when AT&T, the incumbent monopoly provider, faced growing competition in the long distance market. During that time AT&T supported a universal service policy that was designed to defend its status as monopoly provider by advocating ubiquitous access to basic telephone service for all rather than interconnection between competing networks.[95]

116. Historically, universal service consisted principally of a number of implicit subsidy mechanisms at the state and, to a lesser extent, federal levels designed to lower costs for rural service at the expense of urban customers, lower costs for residential service at the expense of business customers, and lower costs for local service at the expense of long distance service. For example, during this period, most states had local rate levels that required businesses to pay more on a per-line basis for local service than residential customers paid for similar service. Moreover, most state regulators set rates for vertical services such as touch tone, conference calling and speed dialing, so that these ancillary services would also subsidize basic residential local service.[96]

117. Since the early-1980s, following the breakup of AT&T and the divestiture of the Bell regional operating companies together with limited competitive entry into the long distance telephone market that began at that time, regulators began to institute explicit access charges, which long distance companies had to pay to local operating companies for use of the local telephone network for the origination and termination of long distance calls. Since these access charges were generally set above costs, they had the effect of subsidizing local phone service at the expense of long distance customers. At the same time the Federal Communications Commission (FCC) introduced two targeted universal service programs, “Life-line” service and “Linkup America,” funded primarily by a charge on long distance calls.[97] The FCC also explicitly subsidized the cost of local exchange carriers operating in high-cost areas by establishing a universal service fund that was funded through charges on long distance carriers.

118. In 1996, Congress, through the 1996 Telecommunications Act, made significant changes in universal service policy. First, the 1996 Act codified federal universal service policy. Second, the scope of universal service was extended to provide benefits beyond the traditional recipients. Third, the 1996 Act altered the mechanism for funding universal service obligations at the federal level. In accordance with the 1996 Act, the FCC initiated a trilogy of actions involving competitive entry into local telecom markets, access charge reforms, and changes in universal service policy.

119. The 1996 Act requires that universal service support be specific, sufficient, and competitively neutral. The Act makes qualifying entrants eligible to receive support for providing certain specified services in certain areas. It permits incumbents to petition to be relieved of universal service duties (although such requests need not be accepted). As a result of changes in universal service policy brought about by the Act, a larger segment of society is now eligible to receive specific support from the universal service fund that is paid for by the interstate carriers.

Responses to Questions (Telecommunications Sector)

Q: Please list the primary telecommunications, post, transport and electricity services that are covered by non-commercial service obligations.

120. Core services covered by universal service obligations at the federal level include: voice grade access to the public switched network, with ability to place and receive calls; Dual Tone Multi-frequency (DTMF) signaling or its functional equivalent; single-party service; access to emergency services,

including in some instances, access to 911 and enhanced 911 (E911) services; access to operator services; access to inter-exchange services; access to directory services; and toll limitation services for qualifying low-income consumers.[98] Although access to the Internet is not part of the core services, access to advanced telecommunications and information services including access to the Internet is included in the services eligible under universal service support targeted to schools, libraries, and rural health care providers.

121. The 1996 Act also includes provisions for targeted subsidies for Telecommunications Relay Services (TRS) that provide hearing and speech impaired telephone customers with functional equivalent access to telephone service.[99] Another set of targeted subsidies in the telecom sector is provided by the Department of Agriculture under its Rural Utilities Services program.

122. Since both federal and state governments are responsible for implementing the universal service programs, some states have defined their own set of core services covered by universal service. For example, a survey of state public service commissions found that some states include privacy protection, access to repair services, and unlisted directory service in universal service obligations.[100] A recent General Accounting Office (GAO) survey of state regulators shows that the states implement a variety of state-level universal service programs in addition to the federal universal service program. For example, some states have programs targeted to help high-cost and small local telephone companies. These states also allow state communications networks that link schools, libraries, local governments, and community facilities to receive services at a discounted rate.[101]

Q: Are there any general government policies towards USOs? … What services are currently being considered as potential universal service obligations?

123. The 1996 Act articulated universal service policies at the federal level. These policies are based on the following guiding principles: increased reliance on explicit funds and support mechanisms that are specific, predictable, sufficient, and portable among carriers; support mechanisms that are competitively neutral so that the rules governing support mechanisms neither unfairly advantage nor disadvantage one provider or technology over another; and all providers of telecommunications services should make an equitable and non-discriminatory contribution to the preservation and advancement of universal services.

124. Based on the above principles and policies, the FCC implemented several universal service programs that are targeted to support customers in rural, insular, and high-cost areas, low-income customers, rural health care providers, and schools and libraries. Also, the TRS program provides help to hearing and speech-impaired customers. The high-cost program includes high-cost loop support, general high-cost support, local switching support, long-term support, interstate access support, and interstate common line support. The low-income program includes Linkup, Lifeline support, and toll limitation services.

125. Under provisions of the 1996 Act, states have the authority to preserve and advance universal service by following the universal service principles set forth at the federal level. Pursuant to the Act, as mentioned above, some states have implemented state-level universal service programs that go beyond the scope of federal universal service programs.

126. The FCC, along with the Federal-State Joint Board on Universal Service, has recently considered whether to include several specific new services in the list of core services supported by universal service funds. The services considered include advanced or high-speed services such as high-speed Internet access, unlimited local-area calling, soft dial tone or warm line services, prepaid calling plans, payphone lines, Braille TTY, two-line voice carry over service, N11 codes, toll or expanded area service, modified voice-grade access bandwidth, transport costs, the establishment of a rural wireless carrier eligibility

category, technical and service standards, and equal access.[102] The FCC decided to retain the current list of core services eligible to receive universal service support since the additional services that were considered failed to meet the criteria for adding new services that were established by the 1996 Act.[103]

Q: Have non-commercial service obligations impacted efforts at liberalization? Please discuss how, in liberalizing industries, USOs have been met.

127. The liberalization provisions of the 1996 Act made certain of the previously implicit subsidies transparent without affecting the scope of the obligations. One direct impact of this change is that the federal charges for universal service are clearly identified on consumers' monthly telephone bills.[104] However, liberalization affected the pricing of core services supported by the universal service fund. For example, as a result of reform at the federal level of access charges (i.e., charges levied on long distance companies for access to the local loop), the implicit subsidies from long distance to local users have been replaced by an explicit interstate universal service support mechanism. More specifically, access reform reduced the non-traffic sensitive portion of interstate access charges and encouraged local telephone companies to recover these charges through a flat rate charge on local service.[105]

128. In contrast to access reform and lower long distance rates, analysts point out that many states have continued to promote affordable basic telephone service by continuing to allow implicit subsidies that existed prior to the liberalization.[106] For example, GAO reports that a majority of states still practice geographic rate averaging and value-of-service pricing to set local rates. This promotes lower rates in rural and high-cost areas than would otherwise prevail.[107] As a result, customers in low cost urban areas subsidize customers in relatively high cost rural areas. Similarly, monthly rates for single line businesses are higher than single line residential rates in most states.[108] Moreover, rates for services that are not part of local basic telephone service, including, for example, caller ID, call waiting, and call forwarding, are set above their cost by many state utility commissions in order to subsidize local phone service.[109] Critics have charged that these current rate distortions create artificial incentives that encourage new entrants to enter only those markets where rates are artificially set above costs, e.g., the business market in urban areas, and neglect areas where rates are low but the cost of providing service is high, such as for rural customers.[110]

129. Economists have argued that in the event of complete rate rebalancing, universal service will not be significantly affected. This is because studies have found that local residential rates and telephone subscriptions have very low price elasticity.[111] For example, a study of consumer expenditures for local and long distance telephone services found that very few consumers' welfare will be adversely affected if long distance rates are reduced and local rates are increased by the same proportion.[112]

Q: Have non-commercial service obligations changed with privatization? Please discuss the role of privatization in the definition and financing of USO's.

130. Telecommunications services in the U.S. have always been private. As described above, liberalization of local and long distance markets has had very little effect on the scope of universal service obligations. Rather, changes in universal service have been dictated by legislation.

131. Since the passage of the Act, in response to anticipated competition, a number of states have initiated various degrees of rate rebalancing – an effort to bring the relative rates for the different classes of service into closer conformity with costs. The effect will be to reduce the artificial incentives for entry and exit created by implicit subsidies.

132. Also, at the federal level, the 1996 Act altered the funding mechanism by requiring all carriers providing interstate telecommunications service to contribute to the universal service fund. Prior to the

Act, only interstate inter-exchange carriers were required to contribute to the universal service fund, and the amount of contribution was based on number of subscriber-lines presubscribed to the inter-exchange carriers.

133. More recently, in response to the changing nature of the telecom market, the FCC is reviewing the contribution methodology used to fund universal service obligations.[113] The primary contribution source for universal service funding -- revenues from interstate access and long-distance services -- are declining due to factors such as the migration of customers to new products and services, e.g., flat-rate pricing for bundles of minutes by wireless carriers, local exchange carrier's entry into the long distance market made possible by liberalization (Section 271 filings), and related price competition between the new entrants, wireless carriers and incumbent long distance carriers. In addition, a large number of customers are using wireless services instead of inter-exchange wireline service to make long distance calls. Likewise, many customers are using new technologies like voice over Internet to make long distance calls. This may reduce the overall amount of revenue available for universal service funding under the current funding methodology.

134. The FCC sought comments on proposed changes in the contribution methodology including shifting from the current revenue based assessment system to a connection based assessment method whereby universal service contributions would be based on the number and capacity of connections a contributor provides to the public network. Additionally, the FCC also sought comments on proposals that would assess all connections based on capacity, and split assessments for switched connections between local exchange carriers and inter-exchange carriers, or assess switched connections based on working telephone numbers and assess non-switched connections based on capacity.

Q: Deciding to make a service a USO. Please explain factors that are considered when deciding whether a service should be a universal service obligation. Are these designations reviewed on a regular basis? If not, why not?

135. The 1996 Act recognizes that universal service represents an evolving level of telecommunications services and directs the Federal-State Joint Board on Universal Service to periodically recommend to the FCC services that should be supported by the federal universal service support mechanism. More specifically, the Act directs the Joint Board and the FCC to consider telecommunications services to be included in the definition of universal service that: (1) are essential to education, public health, or safety; (2) have through the operation of market choices by consumers been subscribed to by a substantial majority of residential customers; (3) are being deployed in the public telecommunications networks by telecommunications carriers; and (4) are consistent with the public interest, convenience and necessity.[114]

136. The Joint Board and the FCC have on a couple of occasions as directed by the Act considered the possibility of making new services eligible for universal service support. Recently, for example, the FCC on the recommendation of the Joint Board has concluded that high speed Internet access as well as some other new services do not satisfy the above four criteria and hence do not qualify for universal service support at this time.

Q: State whether universal service access is also considered as an option. For example, with Internet service, a user can go to an Internet café to access the network or stay at home. Staying at home requires access to a computer, which many disadvantaged consumers do not have. Thus, universal service access may be preferred, through sharing of common facilities.

137. Although universal telecommunications access through shared facilities is promoted in many countries with low telephone penetration, universal access through the sharing of common facilities has not been considered in the U.S.

Q: Evidence of under provision. Please state whether there is any evidence that, without USOs, a service would be underprovided and that many people would not choose to purchase the service. What sort of evidence is required to show that an individual service should be subsidized via a USO? Are the subsidies general or targeted at the desired user group that would not otherwise receive the service?

138. Although approximately 5% of U.S. households were without telephone services in 2001,[115] very few of this number may be attributed to an under availability of telephone service. Experts have attributed the lack of telephone service to low income, race, mobility, and a desire for privacy.[116] One of the biggest reasons for not subscribing to telephone service may be the up-front connection charges.[117] Another reason may be the loss of local service due to the nonpayment of bills, which often is caused by nonpayment for long distance services. Also, telephone companies attribute less than perfect penetration rate to high “build out” cost where building a new line may cost $10,000. Since the 1980s two targeted subsidy programs, Life-line and Link-up, are administered by the FCC to subsidize monthly subscription rates and installation charges for qualifying low-income households. Three additional subsidies are provided under the federal universal service program. They are targeted towards helping telephone customers in rural, insular, and high cost areas, rural health care providers, and schools and libraries.

139. While residential telephone penetration rate has remained high over the past three decades, critics have argued that it has little to do with the universal service program. Using results from econometric models, the critics argue that since local telephone service has a low price elasticity of demand, subsidizing local rates will have very little impact on increasing telephone penetration even when the subsidy is targeted.[118] A recent study concerning ‘E-Rate’ subsidies for the Internet access to schools and libraries (including maintenance costs and the cost of internal connections), however, concluded that E-Rate subsidies accelerated the introduction of Internet to some California schools by about four years.[119]

Q: Entry barriers. Does establishing a USO occur in conjunction with entry restrictions that exclude competitors from part or all of a market? Is the argument based on cream-skimming concerns? If so, is any evidence required that, in the presence of cream-skimming, total industry costs will increase significantly? Are entry barriers less appropriate if an industry is operating inefficiently?

140. While incumbent local exchange carriers have pricing, marketing, service provisioning, service quality, as well as carrier of last resort (COLR) obligations, under provisions of the 1996 Act any common carrier, including new entrants, may be designated as an eligible carrier to receive universal service support if it satisfies the following requirements. To be designated as an eligible telecommunications carrier, a common carrier must: (1) offer designated core services supported by universal service throughout the service area using its own facilities or a combination of its own facilities and resale of another carrier’s facilities; and (2) advertise the availability of such service and the charges. Generally, state commissions make the designation of which common carriers are eligible for universal service support.

141. Although concerns have been raised by incumbents regarding cream-skimming by new entrants, the requirement that eligible carriers offer the supported services throughout the service area to some extent mitigates the cream-skimming concern.[120] In addition, new entrants are also subject to exit barriers where an eligible carrier seeking to exit a service area served by more than one eligible carrier must receive permission from the relevant state commission before ceasing operations. A recent study examined the effects of different telecommunications policies, including universal service policies, on the development of competition in local telephone markets, and found that the presence of explicit federal subsidies in high cost wire centers leads to a higher probability of entry in those (the subsidized) markets.[121] The study also found that when differences in rates and costs are due to implicit subsidies, they tend to attract competitors in urban markets while keeping competitors away from rural markets.

Q: Definition of universal service. The precise definition of universal service can often play a significant role in determining who is eligible for universal service funding. Some definitions are physical, such as fixed line access to a general telephone network, and other definitions are conceptual, such as a service that allows for the connection of a user to the general telephone network from a fixed location. Sometimes definitions are enshrined in law and therefore difficult to change, and at other times they are enshrined in regulations, and easier to change. How are services defined – in physical or conceptual terms? Are efforts made to define services so that multiple companies could provide them?

142. The 1996 Act directs the FCC to establish the definition and provides the Commission with criteria to consider. More specifically, according to the Act universal service represents "…an evolving level of telecommunications services that the [FCC] shall establish periodically . . . taking into account advances in telecommunications and information technologies and services."[122] The FCC shall consider the extent to which such telecommunications services: "(A) are essential to education, public health, or public safety; (B) have, through the operation of market choices by customers, been subscribed to by a substantial majority of residential customers; (C) are being deployed in public telecommunications networks by telecommunications carriers; and (D) are consistent with the public interest, convenience, and necessity."[123] The Act also directs the Joint Board and the FCC to periodically review the list of services that can receive support from the universal service mechanism. To be included on this list, specific services must meet certain public interest criteria. While incumbent local exchange carriers are COLR, the 1996 Act allows other carriers to be eligible for universal service support providing they meet certain requirements to be eligible. Additionally, the competitive neutrality principle, one of the guiding principles of universal service policy, requires that universal service rules and mechanisms neither unfairly favor or disfavor one provider over another, and neither unfairly favor or disfavor one technology over another. The concept of technological neutrality embodied in the competitive neutrality principle is intended to foster the development of competition from providers other than traditional wire-based telephone companies such as wireless providers, cable operators, and certain small businesses. These competitors would become eligible for universal service funding in designated areas under certain circumstances.[124]

Q: Selection of universal service provider. The provider of universal service, such as public phone service, can be selected by legislation, by a regulator, or by a bidding process. Are any other mechanisms used? Generally, how is the provider of universal service selected? Is the selection made at the national level? Could the selection be made on a narrower geographic level? If the selection were based at a narrower level, would that increase the number of potential providers of the service?

143. Generally, state commissions designate carriers that are eligible to receive universal service support. Incumbent local exchange carriers generally are the COLR. Unlike other universal service support programs, the Act requires that schools and libraries and rural health care providers must seek bids

for eligible services. The services considered eligible for support under this program include telecommunications services, Internet access, and the installation and maintenance of internal wiring and connections. Selection of providers is based mostly on price, i.e., low bidder usually wins, but other factors such as prior experience, personnel qualifications, and management capability, are sometimes also used to determine the winning bidder.

Q: Benefits to provider of universal service. Does the provider of a universal service receive any explicit payment for the provision of that service? If so, how large are the payments? Must the universal service provider demonstrate that it provides the services at a non-commercial rate?

144. Generally, any carrier designated as eligible to participate in any of the four universal service support programs -- high cost, low income, rural health care, and schools and libraries -- can receive payments from the universal service fund. Size of the payments depends on the cost of providing the service.

Q: On what basis are costs calculated for USO provision? Are the costs used historical? Are the costs forward-looking? Are models used to estimate the costs? Are these engineering models, as perhaps for telephone and electricity services? Are these process models, as might be appropriate for postal delivery? Is the objective to provided services of a predefined quality at the minimum price? How is the minimum established? Establishing the costs of efficient provision can be a particularly difficult problem with respect to labor inputs. How is the efficient labor cost calculated, if it is different from the actual labor cost?

145. The FCC determined in May 1997 that the high cost universal service support program should be based on the forward-looking economic cost of constructing and operating network facilities and functions used to provide the supported services. Accordingly, the FCC developed a Hybrid Cost Proxy Model (HCPM) based on a forward-looking cost methodology to estimate non-rural carriers' cost of providing services in high-cost areas. The support for rural carriers is based on their embedded or book costs. The Federal-State Joint Board on Universal Service, however, has recommended a gradual shift to a forward-looking economic cost mechanism for rural carriers. Support for low income, schools and libraries, and rural health care, is based on the status of the beneficiary. Payments are made directly to carriers, who pass along those payments to the customer.

Q: Does the provider receive advantages from providing the universal service? How are benefits of universal service provision evaluated? Are the techniques for evaluating the advantages scientific?

146. In 1997, the FCC determined that universal service support should be competitively neutral and portable. As a result, a competitive eligible telecommunications carrier (CETC) receives the same per-line support amounts for serving a customer in the incumbent's service area as the incumbent carrier receives. This support is available regardless of the technology, regardless of the provider's costs, and regardless of whether it is a primary or secondary line for the customer. Recently, some rural incumbent carriers have raised concerns about the current CETC support rules. Specifically, they contend that providing support to CETCs based on the incumbent's costs provides incentives for inefficient entry and gaming of the universal service program, and provide a windfall for the CETC. On the other hand, CETCs argue that their ability to compete with incumbents that receive high cost support depends on CETCs' ability to participate in the support program.

Financing (Telecommunications Sector)

Q: Are there any general government policies with respect to the financing of USO's? Examples might include internal financing within the firm or financing through general taxation. When the cost of USO's is calculated, are competitors required to participate in its financing? What mechanism is used to calculate the contribution of competitors? If market share is involved, how is each market participant's share calculated?

147. Telecommunications carriers that provide interstate telecommunications services are required to contribute to universal service. These carriers, however, are not prohibited from recovering their contributions from their customers in an equitable and nondiscriminatory manner. Contributions to the universal service fund are based on carriers' interstate and international end-user telecommunications revenues. Carriers submit their revenue data quarterly. The Universal Service Administration Company (USAC), a third party administrator of the universal service fund, submits demand information for each of the four programs and industry revenue information. The FCC then derives a contribution factor, which is basically total program demand divided by total industry revenue. USAC applies this quarterly contribution factor to each individual carrier's revenue and bills each carrier for that amount. All telecommunications carriers, including both incumbents and competitors, with revenue from interstate and international end users are required to contribute to the universal service fund. The FCC is reviewing the current revenue based assessment system in light of a changing marketplace. New funding proposals include assessment based on the number and capacity of connections provided to a public network

Q: If the universal service provider receives a payment, how is the decision made to determine whether universal service funds will be collected through general taxation or specific taxes on users of telecommunications services?

148. Universal service is supported by charges collected from telephone users by carriers. These charges initially were imbedded in the rate-base, but now have become explicit charges added onto regular service charges.

Q: For universal service funds that are raised through general taxes, are the costs for subsidizing rural customers born by the federal government, regional, or local authorities? Would it be more efficient to allow local authorities to choose (and pay for) the level of service they wish to subsidize, than for federal authorities to determine both the level of service eligible to receive subsidies and the schedule of payments? Why or why not? What are the problems with local authority payment? What are the benefits?

149. The dual jurisdictional nature of telecommunication regulation in the U.S. requires close cooperation between federal and state regulators. This is also the case in formulating and implementing universal service policies and programs. While the FCC is responsible for implementing policies at the federal level, state public utility commissions are permitted to adopt their own universal service programs that do not conflict with federal programs. For example, state public utility commissions may maintain their own state high cost funds. In addition, if states support a low-income program, eligibility for federal low income support is based on the state criteria. The FCC defers to state eligibility criteria for the low-income program since the states are in a better position to determine consumer needs.

Q: USO's are frequently used as a justification for otherwise abusive behavior by incumbent operators. Is there any antitrust case in your jurisdiction where the competition authority has accepted/not accepted that argument? Please describe your main cases.

150. We are not aware of any such cases.

Q: Web sites. Please provide web site addresses containing government publications related to the topic of non-commercial service obligations or USOs.

FCC Internet Address:

www.fcc.gov (for general information)

www.fcc.gov/wcb/universalservice (for specific universal service information)

Universal Service Administrative Company (USAC) Internet Address:

www.universalservice.org (USAC administers the FCC's universal service programs)

National Exchange Carrier Association (NECA) Internet Address:

www.neca.org (NECA administers various state universal service programs)

Industry-Specific Questions (Telecommunications Sector)

Q: Should local fixed-line phone service (excluding mobile) be considered a universal service, or should access to the telephone network (including mobile) be considered a universal service? Is the price for establishing a new residential connection to the network uniform across all regions? Can anyone besides the local telephone incumbent build such connections? Is there any evidence that universal directory services would not be provided in the absence of a universal service requirement? Should directory services be characterized as a universal service eligible for subsidy from the universal service fund?

151. The FCC designated the following services as eligible for universal service support: (1) voice-grade access to the public switched network; (2) local usage; (3) Dual Tone Multi-frequency signaling or its functional equivalent; (4) single-party service or its functional equivalent; (5) access to emergency services including, in some circumstances, access to 911 and Enhanced 911; (6) access to operator services; (7) access to inter-exchange service; (8) access to directory assistance; and (9) toll limitation services for qualifying low income consumers.[125] The FCC determined that support should be competitively neutral and portable to promote competition among traditional wireline and other providers including wireless and cable. As a result, any eligible telecommunications carrier (including wireless carriers and cable) by providing the services listed above can receive support from the universal service fund. The support is available regardless of the technology and regardless of the provider's costs.

152. To be designated an eligible telecommunication carrier, the carrier must offer supported services over its own facilities or a combination of its own facilities and resale of another carrier's service.

153. The price of connecting a new residence to the network is not uniform across regions. According to recently released FCC data, the connection charges for residential telephone lines in 95 selected U.S. cities ranged from $13.57 to $62.83.[126]

154. As mentioned above, access to directory service is part of the core services supported by universal service funds. The FCC found that access to directory service satisfied the statutory criteria for determining core services and therefore could receive support from the universal service fund. More specifically, the FCC concluded that access to directory service is used by a substantial majority of residential customers, is widely available, is essential for education, public health, and safety, and is consistent with the public interest, convenience, and necessity.

NOTES

1 These materials, organized by Kirin Duwadi, Ph.D., Economist, U.S. Federal Communications Commission, (kduwadi@fcc.gov); John Henly, Ph.D., Economist, U.S. Department of Justice, (john.henly@usdoj.gov); and John C. Hilke, Ph.D., Economist and Electricity Project Coordinator, U.S. Federal Trade Commission, (jhilke@ftc.gov), reflect current US practice, but should not be construed to hold any of the FCC, DOJ, FTC or any other U.S. government entity to a prescribed future course of conduct.

2 We use the terms “fees” and “taxes” interchangeably here whether levied by a regulator or another body. Regardless of who levies the amount, if a fee or tax forces price away from marginal cost, the effect, depending on the elasticities of demand, is to distort consumption and create deadweight losses.

3 A second approach, where a legal or de facto monopoly still exists on a service, or on a critical input to the service, is to permit part of the value-added to be provided competitively while the monopolist continues to provide the critical input or service at a price high enough to fund redistribution programs. Global price-caps and avoided-cost pricing or ECPR are examples. This is closer to the approach taken with postal services in the United States.

4 Another approach to benefits is to procure certain universal services by auction where ex post competition is not possible.

5 In many instances, the size of these programs inadvertently grew beyond the original expectations of proponents since the size and growth of the programs was not transparent. Liberalization served in these cases as an opportunity for public officials to revisit policy areas that had been relatively dormant for many years.

6 The relative success of privately supplied mobile services, normally without universal service funding, is at least a cautionary tale about the impact of some wireline pricing practices designed with the politics of distribution, not economic cost, in mind. In much of the developing world state owned telcos provided residential wireline service that was administratively rationed, far from universal, and sold at prices held below cost by the politics of distribution. Below-cost prices did not provide a sufficient source of investment capital and service to permit the many people willing to buy phone service at economic cost to do so. Many of these people in recent years have purchased unregulated or loosely regulated wireless services that are available at market prices that provide a return sufficient for service expansion. In these circumstances market prices do more to increase penetration than those that are held artificially low.

7 Issues in state liberalization programs are discussed in the FTC staff report: Competition and Consumer Protection Perspectives on Electric Power Regulatory Reform: Focus on Retail Competition, FTC (September 2001). In response to concerns about the electricity situation in California, several states with liberalization programs have extended the transition period and its associated regulation of POLR service prices beyond the period required for stranded cost recovery.

8 See, for example, John C. Hilke and Michael Wise, AWho Turned Out the Lights? Competition and California=s Power Crisis,@ Antitrust 15:3 (Summer 2001), pp. 76 to 81.

9 The Center for the Advancement of Energy Markets (CAEM) publishes the ARed Index@ ranking and comparing the elements in retail electricitity liberalization programs of the states and some foreign jurisdictions.

10 Eligibility is generally based on income with the cut off being 150% of the government-determined poverty level.

11 An instructive insight into state decisions on USO issues is the June 12, 2002, AReport of the Universal Service Working Group@ in Maryland, In the Matter of the Electric Universal Service Program, Before the Public Service Commission of Maryland, Case No. 8903.

12 The public programs of twelve liberalizing states are described in Appendix A of the FTC Staff Report Competition and Consumer Protection Perspectives on Electric Power Regulatory Reform: Focus on Retail Competition, FTC (September 2001). For an early summary of state legislation and state commission policy regarding the scope and design of universal service programs in states with liberalized retail customer choice programs, see Barbara R. Alexander, ASummary of State Electric Restructuring Legislation: Universal Service Provisions,@ unpublished (January 1, 1998), available upon e-mail request from jhilke@ftc.gov.

13 The Rural Electrification Act was passed by Congress in 1936 to provide low-cost loans to provide wiring and to help rural homes and farms acquire electrical and plumbing appliances and equipment. These programs are now located in the Department of Agriculture, Rural Utilities Service unit. AIt helps rural America finance electric, telecommunications, and water and wastewater projects, and makes loans and grants for rural distant learning and telemedicine projects.@ There is also a National Rural Utilities Cooperative Finance Corporation that makes low-cost loans for such projects.

14 FTC Staff Report Competition and Consumer Protection Perspectives on Electric Power Regulatory Reform: Focus on Retail Competition, FTC (September 2001), Appendix A, Maine State Profile.

15 Other programs included within this bundle of public programs typically have included consumer education programs, research concerning renewable energy sources, insulation subsidization programs, distributed generation pilot programs, and some demand management programs.

16 Decisions to adopt these policies were taken after several years of declining prices for energy, natural gas in particular.

17 FTC Staff Report, Competition and Consumer Protection Perspectives on Electric Power Regulatory Reform, FTC (July 2000), Section VII.

18 One form of subsidy is Alife-line rates@ in which the initial block of power, representing Anecessary consumption@ is priced at a lower rate than subsequent blocks for all residential customers.

19 See, for example, AElectric Utility Industry Restructuring: Issues for Rural America, Rural Conditions and Trends 9:30 (a publication of the U.S. Department of Agriculture) and ARural Electrification: Lessons Learned,@ World Bank Group, No. 177, February 2001.

20 Another variation is the system adopted in the state of Massachusetts. Massachusetts offers two forms of POLR service. One is for the original customers that did not select a retail marketer and this service continues to be priced at a regulated rate. The other POLR service is Massachusetts is for customers that have switched back to POLR service from an independent retail marketer. The second service is offered at a price that tracks average wholesale prices in the state. [FTC Staff Report Competition and Consumer Protection Perspectives on Electric Power Regulatory Reform: Focus on Retail Competition, FTC (September 2001), Appendix A, Maine and Massachusetts State Profiles.]

21 More recent developments in the Georgia retail natural gas program are discussed in the FTC Staff Comment before the Georgia Public Service Commission, AStandards for Determining Whether Natural Gas Prices Are Constrained by Market Forces,@ Docket No. 15640-U, filed April 25, 2003. FTC staff comments are available in chronological order on the U.S. Federal Trade Commission=s web site under formal actions, advocacy comments.

22 For example in Lill v. Cavalier Rural Electric Cooperative [456 N.W. 2d.527 (N.D. 1990)] the court approved charging an extra fee for connecting a customer to the distribution system.

"The Co-op was organized in 1948 under Title 10-13 of the North Dakota Century Code and is financed by the Rural Electrification Administration in Washington D.C. Under North Dakota law, the Co-op is not considered a public utility. Section 49-03-01.5(2), N.D.C.C.2 In addition to the powers granted by the general law governing electric cooperatives, the Co-op had the power to >fix, regulate, and collect rates, fees, rents, or other charges for electrical energy and other facilities, supplies, equipment, or services furnished by it.= Section 10-13-03(8), N.D.C.C. Further, since each electric cooperative is required to be operated without profit to its members, the rates, fees, rents and other charges for electrical energy and for any other facilities, supplies, equipment or services shall be sufficient at all times to (1) >pay all the operating and maintenance expenses necessary or desirable for the prudent conduct of its business and the principal and interest on the obligations issued or assumed by the cooperative in the performance of the purpose for which it was organized= and (2) to create reserves. Section 10-13-05(1)(2), N.D.C.C.

In this case, the evidence reflects that the Co-op would have required a deposit or a minimum length service agreement from any person who desired electrical service to the Lill farmstead due to the high costs of the electrical line installation.@

23 Rate differences between customer classes that are not cost-based come under increased scrutiny when generation is unbundled. Preserving a given value of rate difference when applied to the remaining non-generation part of the electric bill requires much larger (and therefore more noticeable) percentage differences between customer classes. Once energy charges are unbundled and subject to competition, discrimination is less sustainable on that portion of the bill.

24 Some cable and telephone companies have unbundled some aspects of distribution maintenance services. In particular, service maintenance work inside the customers home may be provided under hourly charges unless the customer has elected to pay a monthly service fee for in-home service work.

25 Retail marketers, like other suppliers of services to the public, remain subject to the anti-discrimination laws.

26 Much of the controversy surrounds use of the distribution utility=s name and logo by the provider of POLR service or by another retail marketer affiliated with the distribution utility in that area. For discussion, see the FTC staff report: Competition and Consumer Protection Perspectives on Electric Power Regulatory Reform: Focus on Retail Competition, FTC (September 2001), Chapter V, Section D.4.

27 Slamming occurs when a retail marketer claims that a customer has switched to them, when, in fact, the customer has not requested this switch. States penalize slamming by retail marketers. Some states have allowed switching to an independent retail marketer by aggregations of customers often organized by a local government unit. Effectively, the POLR supplier changes. Such large-scale switching has been prominent in Ohio, for example. Usually switching by aggregations of customers is accompanied by an Aopt-out@ provision that allows an individual customer to continue to buy bundled service with the former POLR service provider if the customer explicitly requests this. Relatively few customers opt out of aggregation switches.

28 The state of Maine is an exception. There, POLR service for various groups of customers is bid out periodically by the state=s public utility commission.

29 Immunity to the antitrust laws accorded to petitioning behavior and to state actions have come under scrutiny. See, John T. Delacourt, AThe FTC=s Noerr-Pennington Task Force: Restoring Rationality to Petitioning Immunity,@ Antitrust 17:3 (Summer 2003), pp. 36-40.

30 At the same time, FERC has sought to reduce artificial differences in electricity costs. For example, FERC has also sought to reduce pancaking of transmission rates under which an additional charge is incurred any time a transmission path crosses from one transmission control area to another.

31 See the U.S. submission for the October 2002 roundtable (p. 17) on Competition Issues in the Electricity Sector.

32 39 U.S.C. § 101(a).

33 39 U.S.C. § 403(a).

34 39 U.S.C. § 101(b).

35 39 U.S.C. § 404(b).

36 39 U.S.C. § 3623(d).

37 Delivery timeliness for First-Class Mail is measured, but no absolute standard is applied. There are some very limited exceptions to the 6-day per week delivery standard. There are certain additional quality of service obligations placed on the USPS including legal privacy-of-the mails and a ban against fraudulent use of the mails. The USPS has an independent police force to enforce these obligations.

38 U.S. Postal Service 2002 Annual Report; USPS Five Year Strategic Plan (2003).

39 Until recently, there was considerable concern that the USPS had underfunded its pension obligations by more than $25 billion. At the suggestion of the General Accounting Office, this issue was examined by the Office of Personnel Management (OPM) which determined that, in fact, the statutory requirement establishing pension funding obligations resulted in the USPS instead accelerating payments of its pension liabilities by more than $70 billion (due largely to an increase in the interest rate applied to its payments during the late 1970s and later years). As a result, the statute establishing USPS pension funding requirements has been changed resulting in a substantial reduction in the Postal Service's required pension fund contributions during the next forty years. This has alleviated some of the immediate concerns about USPS finances.

40 Econometric estimates of the price elasticity of demand for FCM have remained quite stable over time. This stability is one indication that it may still be economically appropriate to evaluate FCM as a separate market.

41 AEmbracing the Future: Making the Tough Choices to Preserve Universal Mail Service.@

42 39 CFR 310, 320 et seq.

43 39 U.S.C. § 101(a).

44 39 U.S.C. § 403(a).

45 39 U.S.C. § 101(b).

46 39 USC § 101.

47 39 U.S.C. § 404(b).

48 39 U.S.C. § 3623(d).

49 39 U.S.C. §§ 3626, 3683.

50 39 U.S.C. §§ 3401, 3403.

51 39 U.S.C. § 3622.

52 39 U.S.C. §§ 414, 416.

53 In general, the Private Express Statutes (PES), 18 U.S.C. §§ 1693-1699; 39 U.S.C. §§ 601-606, make it unlawful for any entity other than the Postal Service to send or carry letters over post routes for compensation unless postage on the matter carried by private carrier is paid in an amount equivalent to the applicable postage, or the carriage qualifies for an exception or suspension. Thus, private carriage of letters is not prohibited, although, in many circumstances, the PES make private carriage of nonurgent letters economically disadvantageous. For all items, including those that are not considered letters, such as merchandise, newspapers, and periodicals, private carriers may accept and deliver such items, except that, under a provision known as "the mailbox rule," delivery must be effected through means that do not involve access to mailboxes or post office boxes in Postal Service retail units.

54 39 C.F.R. § 320.6. The President's Commission noted that "some question whether the Postal Service has the authority to define and alter the scope of its own monopoly." President's Commission on the USPS at 24. The Commission also recommended that responsibility for regulating the monopoly should reside with an independent regulatory board. Id.

55 Taking U.S. package delivery as a whole, the USPS share is estimated to be less than 20%. See Alan Robinson, "Competition Within the United States Parcel Delivery Market," Direct Communications Group, Silver Spring, Maryland, who puts the USPS share of parcel delivery at 16 %. See also Rick Callister, Mark Killian, Haicheng Li, and Reiji Tarasaka, AThe Changing Competitive Landscape of the United States Postal Service,@ available at: http://ww.stanford.edu/~terasaka/My%20Webs/projectindex.htm (18 Dec. 2001).

56 The estimated avoided cost for the USPS in 1999 was $15.3 billion. See Robert Cohen, Matthew Robinson, John Waller and Spyros Xenakis, "The Cost of Universal Service in the U.S. and Its Impact on Competition," in Proceedings of the Wissenschaftliches Institut fur Kommunikationsdienste GmbH (WIK) 7th Koenigswinter Seminar on Postal Economics "Contestability and Barriers to Entry in Postal Markets," February 17-19, 2002. Elcano, Mary S., R. Andrew German, and John T. Pickett, "Hiding in Plain Sight: The Quiet Liberalization of the United States Postal System" in Current Directions in Postal Reform (edited by M.A. Crew and P.R. Kleindorfer, Kluwer Academic Publishers) 2000.

57 See Robert Cohen, William Ferguson, John Waller and Spyros Xenakis (with Econometric Appendix by Edward Pearsall), "The Impact of Using Worksharing to Liberalize a Postal Market," in Proceedings of the Wissenschaftliches Institut fur Kommunikationsdienste GmbH 6th Koenigswinter Seminar on Postal Economics "Liberalization of Postal Markets," February 19-21, 2001. See also Marshall Kolin, AWorksharing, Residential Delivery, and the Future of the USO,@ in M.A. Crew and P.R. Kleindorfer, Eds., Current Directions in Postal Reform, Kluwer (2000).

58 The 2003 President's Commission recommends a more general policy of contracting out where private suppliers can perform better or at lower cost.

59 39 USC 3623.

60 18 U.S.C. §§ 1693-1699; 39 U.S.C. §§ 601-606.

61 Letters are defined as messages directed to a specific person or address and recorded in or on a tangible object. Tangible objects include items such as paper, recording disks, and magnetic tapes.

62 Post routes include public roads, highways, railroads, water routes, air routes and letter-carrier routes within the territorial boundaries of the United States on which mail is carried by the Postal Service.

63 One notable exception to the PES is the private carriage of letters conducted prior or subsequent to mailing. In general, this exception permits private carriage of letters that enter the mailstream at some point between their origin and their destination. Examples of permissible activities under this exception include pickup and carriage of letters that are delivered to post offices for mailing, the pickup and carriage of letters at post offices for delivery to addressees, and the bulk shipment of individually addressed letters ultimately carried by the Postal Service.

64 18 U.S.C. § 1725.

65 There is an active literature on various aspects of the U.S. USO. The literature is reviewed in M. A. Crew and P. R. Kleindorfer, ADeveloping Policies for the Future of the United States Postal Service,@ paper submitted to the President=s Commission on the United States Postal Service (February 20, 2003). Research funding for this paper was provided by the FTC.

66 Cohen, Robert, Matthew Robinson, Renee Sheehy, John Waller, and Spyros Xenakis, “An Empirical Analysis of the Graveyard Spiral”, to be published in Competitive Transformation of the Postal and Delivery Sector, edited by M.A. Crew and P.R. Kleindorfer, Boston, MA: Kluwer Academic Publishers, 2003.

67 John Haldi and Leonard Merewitz, ACost and Returns from Delivery to Sparsely Settled Rural Areas,@ in M. A. Crew and P. R. Kleindorfer, Ed., Managing Change in the Postal and Delivery Industries, Kluwer Academic Publishers, 1997.

68 Robert Cohen, Mathew Robinson, Renee Sheehy, John Waller, and Spyros Xenekis, AAn Emprical Analysis of the Graveyard Spiral,@ paper for the 11th Conference on Postal and Delivery Economics (May 2003).

69 Kolin, Marshall, and Edward J. Smith, 1999 "Mail Goes Where the Money is: A Study of Rural Mail Delivery in the United States," in Emerging Competition in Postal and Delivery Services, edited by Michael A. Crew and Paul R. Kleindorfer, Boston, MA: Kluwer Academic Publishers.

70 39 U.S.C. § 3621.

71 Price Waterhouse Coopers, AUSPS Legislative Reform Simulation Model Sensitivity Results,@ February 26, 1999.

72 See, for example, Bradley, Michael and Colvin, Jeff, 2000, "Measuring the Costs of Universal Service for Posts," in Future Directions in Postal Reform, edited by Michael A. Crew and Paul R. Kleindorfer, Boston, MA: Kluwer Academic Publishers; and the Cohen et al. article previously cited. See also Cohen, Robert, Matthew Robinson, John Waller, and Sypros Xenakis, “The Cost of Universal Service in the U.S. and its Impact on Competition,” to be published in the proceedings of the Wissenschaftliches Institut fur Kommunikationsdienste GmbH (WIK), 7th Köenigswinter Seminar on “Contestability and Barriers to Entry in Postal Markets,” November 17-19, 2002.

73 39 U.S.C. §§ 3621 et seq.

74 UPS v. U.S. Postal Service, 455 F. Supp. 857 (E.D. Pa. 1978), aff'd, 604 F.2d 1370 (3d Cir. 1979), cert. denied, 446 U.S. 957 (1980); Associated Third Class Mail Users v. U.S. Postal Service, 405 F. Supp. 1109, 1115-118 (D.D.C. 1975), aff’d, National Assoc. of Greeting Card Publishers v. U.S. Postal Serv., 569 F.2d 570, 595-598 (D.C. Cir. 1976), vacated on other grounds, U.S. Postal Service v. Associated Third Class Mail Users, 434 U.S. 884 (1977).

75 39 U.S.C. § 3621.

76 39 U.S.C. § 3625.

77 Despite the extent and refinement of the analytical techniques reported by the USPS, concerns have been expressed about the quality of the data used in these analyses and the limited access of the PRC and interested parties to the USPS data and analyses. The 2003 Presidential Commission recommends that the sector regulator be given subpoena authority to better assure the reliability of USPS analysis.

78 See Robert Cohen, Matthew Robinson, John Waller and Spyros Xenakis, "The Cost of Universal Service in the U.S. and Its Impact on Competition," in Proceedings of the Wissenschaftliches Institut fur Kommunikationsdienste GmbH (WIK) 7th Koenigswinter Seminar on Postal Economics "Contestability and Barriers to Entry in Postal Markets," February 17-19, 2002.

79 There have been occasions in which the FTC, as the consumer protection agency, has received complaints from competitors of the USPS that USPS claims regarding quality of service (speed of delivery) are false or misleading. None of these have resulted in any formal action by the FTC.

80 28 U.S.C. § 2680.

81 E.g., Portmann v. United States, 674 F.2d 1155 (7th Cir. 1982) (holding the Postal Service to commercial standards for equitable estoppel for claim related to Express Mail); Federal Express Corp. v. United States Postal Serv., 151 F.3d 536, 543 (6th Cir. 1998) (quoting Global Mail v. United States Postal Serv., 142 F.3d 208, 215. (4th Cir. 1998)).

82 The USPS appropriations request for 2003 includes $928 million for reimbursement for services provided by the USPS between 1991 and 1998. Additional funds have been authorized to help pay the USPS for decontaminating its facilities exposed to anthrax and to detect biohazards in the mail and protect postal employees and the American public.

83 Frank Ramsey, AA Contribution to the Theory of Taxation,@ <u>Economic Journal</u> (March 1927). For a discussion, see W. Kip Viscusi, John M. Vernon, and Joseph E. Harrington, Jr., <u>Economics of Regulation and Antitrust</u> 3rd Ed., Cambridge, MA: MIT Press (2000), pp. 350-353.

84 Conversely, the transfer effects are greater when demand is more inelastic.

85 PRC Op & Rec. Dec. at 210-11, Docket No. R2000-1 (Nov. 13, 2000).

86 In its Flamingo Industries v USPS decision (2002), the 9th Circuit Court of Appeals held that Athe Postal Service can be sued under federal antitrust laws because Congress has stripped the Postal Service of its sovereign status by launching it into the commercial world ...[but] our holding that the Postal Service does not enjoy status-based immunity does not prevent the Service from asserting conduct-based immunity if the action of the Postal Service being challenged was taken at the command of Congress." The matter is now before the U.S. Supreme Court.

87 39 USC 202(a).

88 As noted previously, the statutory language only makes it unlawful to place a mailable item in a postal box with the intent of avoiding payment of lawful postage. [18 USC 1725] Similarly, nothing prevents a household from having a second receptacle for other deliveries. Often newspapers provide a separate receptacle for newspapers delivered to rural customers. Further, mail slots (in the door) can legally be used for non-USPS deliveries.

89 It is unclear whether a firm that delivered on this basis would be allowed to operate since doing so might still be a violation of the private express statutes if not the mailbox monopoly statute.

90 FTC Press Release (March 6, 1989). [Available upon request from John Hilke at jhilke@ftc.gov.]

91 There might still be cream skimming in the sense that cost and margin conditions (entry incentives) may differ by route while the fee on private deliveries to mailboxes likely would be set on a system-average basis.

92 Janet Meyers, AFTC Staffer Has Third-Class Idea,@ Advertising Age (March 20, 1989).

93 General Accounting Office, Information About Restrictions on Mailbox Access, GAO/GGD-97-85 (May 1997).

94 Robert W. Crandall and Leonard Waverman, Who Pays for Universal Service, Brookings Institution Press, Washington D.C., 2000; Milton Mueller, Universal Service: Competition, Interconnection and Monopoly in the Making of the American Telephone System, MIT and AEI Press, Cambridge, 1997.

95 Critics argue that AT&T advocated a regulated monopoly regulatory scheme which allowed rate distortions that kept local rates artificially low. See, Crandall and Waverman, and Mueller. Also see, Philip M. Napoli, Foundations of Communications Policy, Hampton Press, New Jersey, 2001.

96 Federal Communications Commission, In the Matter of Federal-State Joint Board on Universal Service, Report and Order, Washington, D.C., May 1997. ("1997 Universal Service Order"). Some analysts have questioned the use of the word "subsidy" to characterize these flows between groups. See, David Gable, "Recovering Access Costs: The Debate," in Making Universal Service Policy, edited by Barbara Cherry, Steven Wildman, and Allen Hammond, Lawrence Erlbaum Associates, Mahwah, N.J., 1999.

97 FCC, Universal Service Order, 1997, p 9.

98 FCC, Universal Service Order, 1997 at p.15.

99 Although TRS is not a part of section 254 of the 1996 Act, which defines federal universal service policy, it provides benefits similar to universal service benefits to a targeted group.

100 International Research Center, "Universal Service to Universal Access", at http://www.researchedge.com/uss/univ_nation.html. Also see, Thomas W. Bonnett, "The new State in Ensuring Universal Telecommunications Services" in Making Universal Service Policy, edited by Barbara Cherry, Steven Wildman, and Allen Hammond, Lawrence Erlbaum Associates, Mahwah, N.J., 1999.

101 General Accounting Office, Federal and State Universal Service Programs and Challenges to Funding, Washington, D.C., February 2002.

102 FCC, Federal-State Joint Board on Universal Service, Order and Order on Reconsideration, July 14, 2003.

103 See section 254(c) of the 1996 Telecommunications Act for the criteria.

104 Telephone companies voluntarily identify these charges in customers' telephone bills.

105 FCC, Access Charge Reform and Order, 1997.

106 See GAO; Bonnett; Gregory Rosston and Bradley Wimmer, "Local Telephone Rate Structures: Before and After the Act", Stanford Institute for Economic and Policy Research, August, 2002. Gable, on the other hand argues that value-of-service pricing is not anti-competitive and that firms regularly price discriminate under competitive conditions. Note that the 1996 Act also limits FCC's ability to rebalance the rates. The Act requires that services rates in rural and high cost areas must be reasonably comparable to those in urban areas and long distance rates must be the same across states.

107 Illinois Commerce Commission (ICC) unlike other state commissions has already initiated movement towards cost-based pricing by reducing or eliminating historical subsidies. The ICC has already established a high cost fund to ease the transition from monopoly to competition in local markets. See, e.g., Robert Lock, "Breaking the Bottleneck and Sharing the Wealth: A Perspective on Universal Service Policy in an Era of Local Competition," in Making Universal Service Policy, edited by Barbara Cherry, Steven Wildman, and Allen Hammond, Lawrence Erlbaum Associates, Mahwah, N.J., 1999.

108 A FCC study shows that average monthly charge for residential flat-rate service in October 2002 was equal to about one-half of the business rate. Paul Zimmerman, Reference Book of Rates, Prices Indices, and Household Expenditures for Telephone Services," Wireline Competition Bureau, FCC, 2003.

109 GAO Report.

110 Rosston and Wimmer.

111 See, Crandall and Waverman for a survey of studies.

112 Frank Wolak, "Can Universal Service Survive in a Competitive Telecommunications Environment? Evidence from the United States Consumer Expenditure Survey," Information Economics and Policy, vol. 8, 1996, pp. 163-203.

113 FCC, Federal-State Joint Board on Universal Service, Further Notice of Proposed Rulemaking and Report and Order, February 2002.

114 FCC, FCC Universal Service Order, 1997, p33.

115 FCC, Monitoring Report, October, 2001.

116 Marlin Bizinsky and Jorge Reina Schement, "Rethinking Universal Service: What's On the Menu," in Making Universal Service Policy, edited by Barbara Cherry, Steven Wildman, and Allen Hammond, Lawrence Erlbaum Associates, Mahwah, N.J., 1999.

117 Christopher Garbacz and Herbert Thomson, "Assessing the Impact of FCC Lifeline and Link-up Programs on Telephone Penetration," Journal of regulatory Economics, Vol11, 1997, pp. 67-78.

118 Ross C. Eriksson, David L. Kaserman, and John A. Mayo, "Targeted and Untargeted Subsidy Schemes: Evidence from Post-Divestiture Efforts to promote Universal Telephone Service," Journal of Law and Economics, Vol. 41, 1998, pp 477-502. Unlike Eriksson, Kaserman, and Mayo, Garbacz and Thomson argue that even targeted subsidies fail to promote universal service. See, Christopher Garbacz and Herbert Thomson, "Do Lifeline Programs Promote Universal Telephone service to the Poor?," Public Utility Fortnightly, March 1997, pp. 30-33.

119 Austan Goolsbee and Jonathan Guryan, "The Impact of Internet Subsidies in Public Schools," Paper presented at the FCC Economic Seminar, July 2003.

120 FCC, 1997 Universal Service Order.

121 Gregory Rosston and Bradley Wimmer, "From C to Shining C: Competition and Cross-Subsidy in Communications," Stanford Institute For Economic Policy Research, Discussion Paper N0. 00-21, Stanford, October, 2000.

122 47 United States Code § 254(c).

123 Ibid.

124 FCC, 1997 Universal Service Order, p. 27.

125 47 Code of Federal Regulations § 54.101.

126 Paul R. Zimmerman, Reference Book.