MARKETABLE RIGHTS

A Practical Guide to the Use of
Marketable Rights as a Regulatory Alternative

September 1981

Project on Alternative Regulatory Approaches

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Guidebook Series on
Alternative Regulatory Approaches

This series is intended to provide a practical introduction -- featuring both the theoretical merits and proven limitations -- to a special set of regulatory alternatives: approaches that are generally most compatible with the market forces that govern business decisions.

The series includes six books:

1) Overview
2) Marketable Rights
3) Performance Standards
4) Monetary Incentives
5) Information Disclosure
6) Tiering

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Book 2 - MARKETABLE RIGHTS
A Practical Guide to the
Use of Marketable Rights
as a Regulatory Alternative

September 1981

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PREFACE

This guidebook is one of a series that is intended to familarize regulators -- and regulation watchers -- with market-oriented approaches to reaching regulatory goals.

One of the significant (although not the best-noted) products of the recent campaigns for regulatory reform has been the growth of a sense of self-consciousness about regulatory decisionmaking.

By and large, regulators now agree that their decisions can and should be a deliberate choice among competing alternatives, and should result from a systematic comparison of the relative costs and benefits among the array of choices. A more thorough analysis of such alternatives will be increasingly important during the reviews by the Office of Management and Budget of major new rules under Executive Order 12291 and in light of pending legislation advocating agency use of alternative approaches. Policymaking is becoming a conscious matter of choosing the "right" tool for the job at hand.

One class of regulatory tools that is of particular interest includes those that bring the least disruption to private decisionmaking in the regulated firms and use market forces to reduce the overall direct and indirect costs of regulation. These market-oriented techniques -- alternative regulatory approaches -- stand in contrast to the traditional "command-and-control" form of regulation, which involves a detailed specification of private compliance requirements and formal sanctions against those who violate them. In general, alternative regulatory approaches can have these relative advantages over command-and-control regulation:

- They provide more flexibility and more incentive for regulated firms to devise <u>least-cost</u> ways to comply.
- They impose <u>fewer indirect costs</u> (e.g., red tape, inspections).
- They are <u>results-oriented</u>, rather than means-oriented.
- They reward private <u>innovation</u>.
- They impinge less on <u>private choice</u> and encourage market competition.
- They avoid the pitfalls of <u>centralized, discretionary decisionmaking</u>.

These alternative techniques are not new inventions -- some regulators have been using them for years. However, as a class they are not yet well understood, and they are still more often a subject of rhetorical debate than serious policy discussions. This tendency has caused some agency skepticism about their practicality. These guidebooks attempt to show that market-compatible techniques are more than interesting ideas -- they are interesting ideas that work to solve real governmental problems.

We do not presume that market-oriented solutions will fit every regulatory program. Only those who know particular programs in detail can determine how appropriate an alternative regulatory approach is in a specific case. Thus, these guidebooks are intended as introductions to the techniques rather than as "how-to-do-it" manuals. We have relied extensively on actual examples of past use. This guidebook on marketable rights, for example, gives 10 examples of marketable rights schemes that four Federal agencies and six State/local agencies have used or proposed. These examples are included for illustrative purposes only; no attempt has been made to evaluate the merit of each action. We hope that a realistic summary of both the merits and drawbacks of these approaches will encourage regulators to begin to count them among the alternative tools at their disposal.

SUMMARY

Marketable rights are government-issued permits that can be bought and sold. Making permits tradeable creates an important new incentive, in contrast to "command-and-control" regulations. Marketable rights have found diverse applications, including land development, natural resources, pollution, and taxi operations.

Advantages -- The main advantage of a marketable rights approach is that it reduces overall costs to the economy. It also can encourage innovation and competition, reduce agency burdens, and provide greater policy flexibility.

Preconditions -- To be a candidate for marketable rights, a regulatory program must be:

- suited to a permits system;
- relatively indifferent to the identity of the user of the controlled rights; and
- free of major structural defects, including monopoly and thinness of the permits market.

Elements of A Permits Market -- Major design features of a permits market include:

- the permit, which may be permanent or temporary, uniform, or stratified by priority or class of ownership;
- the initial allocation scheme, which may be by auction, lottery, "grandfathered" distribution, or a hybrid; and
- facilitating features, such as public eduction, brokerage, and agency gatekeeping functions.

Practical Problems in A Permits Market -- Factors that can complicate the design of an acceptable marketable permits scheme include:

- market defects, including uncertainty perceived by participants, concentration of ownership, and market thinness;

- institutional barriers, including dispute over initial allocations, investment in the status quo, resistance to the profit motive in government-conferred rights, and controversy over the "correct" number of permits; and

- legal constraints, including statutory constraints, rules on the use and disposition of permit revenues, and tax treatment of property rights.

Practical ways have been found to solve most of these problems.

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PART I

MARKETABLE RIGHTS

An Introductory Guide for Regulators

This section presents questions frequently asked about marketable rights as a regulatory technique. The answers reflect actual agency experience.

WHAT ARE MARKETABLE RIGHTS?

Marketable rights are permits that can be bought and sold. Marketable rights are created by government agencies and allow the owner to engage in a specified level of a particular activity or to use a specific amount of a scarce resource. Activities currently regulated using marketable rights are diverse, ranging from limiting taxis and air pollutants to controlling home building in the Lake Tahoe area.

EXAMPLE

Perhaps the most commonly known use of marketable rights is the system of taxi "medallions" used for the controversial purpose of restricting the number of taxicabs in some large cities, including New York. A medallion is a permit to operate a cab, a right limited to fewer than 12,000 operators in New York. Medallion owners are free to sell these rights to others -- in New York, at a current price of more than $50,000.

Many (but of course not all) regulatory decisions involve a discretionary determination of <u>who</u> can do <u>what</u>, and culminate in the issuance of licenses, permits, or certificates, which (explicitly or implicitly) create a valuable, intangible asset for those who hold them. In the traditional "command-and-control" form of permit scheme, the special asset conferred in such a permit is only available to the original permittee -- it cannot be given or sold to others.

A shift to marketable rights can allow an agency to meet its overall goal -- say, reducing aggregate pollution -- while moving away from the detailed, bureaucratic allocation of rights among users, and thus toward a reliance on decentralized market forces to determine who has the use of how much of a particular right.

By creating marketable rights, the regulatory agency changes regulatory incentives in an important way. If the market value of a permit is greater than its business value to a particular firm, for example, the holder will prefer to sell it to someone who needs it more. This represents a net gain to the economy, which makes both buyer and seller better off. If the holder can find a way to use less of the permitted right (e.g., using less irrigation water or polluting less by using a different process) he can convert the excess right to cash -- with no loss of regulatory benefits.

EXAMPLES

The Environmental Protection Agency's "offset" policy is an attempt to limit air pollution by determining the desired amount of overall emissions allowed through permits and making them tradeable. (A new pollution source can operate only by obtaining "offsets" -- equivalent reductions in existing emissions.) By doing so, a private market in a scarce resource (the permission to operate polluting facilities in dirty-air areas) can be created so that those who can reduce pollution most cheaply have a new incentive to sell off extra rights for a monetary gain.

Similarly, Lake Tahoe regulators can reach the goal of uncongested lakeside development by issuing the desirable number of building permits and making them tradeable, so that builders can arrange through market exchanges to use them to get the most value from the least land.

* * *

WHAT ARE THE ADVANTAGES OF A MARKETABLE RIGHTS APPROACH?

The primary advantage of a marketable rights approach over a command-and-control system is that it can reduce the overall cost to industry and to taxpayers of achieving any particular regulatory goal. A system of marketable rights has the potential to lower both total private costs, which are borne by businesses (and ultimately consumers) and governmental costs, which are borne by taxpayers.

Reduces Regulatory Costs to Firms

Marketable rights can help to lower the total economy-wide costs of regulation. Because marketable rights can be bought or sold in a competitive private market, they offer substantial financial rewards for efficiency. Unlike the case when government permits are granted at zero cost, the prices associated with obtaining marketable rights lead businesses to make decisions that

reflect the "social" or "external" costs of their actions -- e.g., the costs of air pollution that are borne by downwind communities, but not by the polluting firm itself. In addition, they help ensure that users with the highest-valued use of the resource that is being rationed by the permit market can, in fact, obtain the permits.

Firms with the lowest costs of reducing emissions, for example, will have the greatest incentive to do so, because reducing emissions will enable them to purchase fewer permits, or to sell those permits they do not need. Each firm can decide whether it is less costly to reduce emissions or purchase a permit. Thus, each firm will spend resources on reducing emissions as long as it is economically beneficial. A marketable rights system therefore differs markedly from a command-and-control system, where firms with low costs of reducing emissions have no incentive to reduce emissions below their permit levels.

EXAMPLES

A Rand study estimates that the compliance costs of a system of marketable rights for non-aerosol freon (chlorofluorocarbons) would be 42 percent less costly to society to implement than a command-and-control system of discretionary curtailments.

For controlling sulfur oxides in the Los Angeles area, a study by the California Institute of Technology estimates that annual abatement costs would fall by more than $20 million with a marketable permits system.

Encourages Innovation

A special advantage of a marketable rights system is that these cost reductions can occur through the adoption of innovative methods. This can produce permanent efficiency advances. Two types of innovation are of interest:

1) There will be a much stronger incentive to develop new technologies that use the right more efficiently.

EXAMPLE

Under marketable rights for air pollution, holders of permits have an incentive to invest

in better pollution control technologies because pollution reductions have cash value -- holders can sell unused rights and buyers will need to buy less. Under command-and-control, in contrast, there are very weak incentives to improve technology once permits are issued.

2) A marketable rights scheme can promote service innovations and management improvement that spread the rights to more users.

EXAMPLES

Federal Communications Commission analysts feel that with transferable permits for spectrum use, innovative use patterns may develop. For example, some users may volunteer to share channels, accepting more interference than the FCC currently allows (or may decide to use more sophisticated equipment that allows shared use of one frequency), saving themselves money in the process. Third parties might enter the scene to coordinate compatible shared frequency bands.

A water user would be encouraged to use his or her appropriation efficiently if any surplus that resulted from more efficient techniques could be rented or sold. If a farmer sells his unused water right, it enables benefits to accrue to another user who gets greater value from it.

Reduces Anticompetitive Effects

Another advantage of marketable rights over the command-and-control approach is that it enhances competition and in this way fosters economic growth, without compromising regulatory goals. Unlike some types of command-and-control regulation, for which the difficulty of obtaining a government permit may represent a significant barrier to entry by new firms, a marketable rights scheme allows new participants a chance to obtain a right.

EXAMPLES

Marketable rights for spectrum use would have made it easier for new competitors to enter telecommunications services by simply buying necessary frequency rights. Some potential competitors were discouraged from trying by the cost, delay, uncertainty, and contentiousness of formal FCC proceedings to award such rights.

The Federal Aviation Administration places limits, for safety reasons, on the rate of landings and takeoffs at airports. At four of the country's busiest airports, these "landing slots" are now allocated by a committee of representatives from airlines currently approved to serve the airport. This procedure allows the existing airlines to prevent access to the airport by carriers not yet approved by simply not allocating them slots. Partly because of concern that this system is inherently anticompetitive, the Department of Transportation has considered a "slot auction" system that would allow any interested airline to bid for slots.

Reduces Agencies' Administrative Burdens

Traditional command-and-control regulation often comes under attack for being expensive and inflexible to administer. The common charge is that government makes excessively detailed, centralized decisions and, once made, these decisions are rarely adjusted to changing conditions of business or technology. The marketable rights approach can reduce these problems by shifting some decisionmaking from the regulatory agency to the marketplace and substitute for detailed agency choices the business judgment of private firms. This can reduce a major administrative burden of regulatory agencies: continually deciding who will bear the costs and benefits of regulatory policies. Under marketable rights, an agency can concentrate its efforts on controlling the overall level of the controlled activity rather than on deciding who can act. Under a marketable rights system, rights are reallocated voluntarily by the regulated parties as they buy and sell -- reducing both the analytic burden of deciding which

applicants should have the scarce rights and the potential protest of disappointed permit seekers.

EXAMPLE

The formal Federal Communications Commission hearing process for assigning and reassigning spectrum licenses is time-consuming, and attending to its many due process legal requirements can be expensive in private as well as public dollars. Allowing spectrum users to reallocate frequencies among themselves in a marketable rights system may free agency resources to pursue other ends.

The relative administrative advantages of marketable rights are even greater after the system is installed. This is because changing circumstances -- new technologies, new substitutes, changing economic conditions -- can be accommodated by market transactions without recourse to new administrative proceedings, as would be required to adjust a command-and-control approach.

EXAMPLE

Patterns of use of chlorofluorocarbons (CFCs) have been changing dramatically in recent years. If EPA were to use command-and-control, use-by-use emission controls to reduce environmental damage from CFCs, it would have to begin expensive new 2-year rulemaking actions for each new use discovered. Under marketable rights, those with new CFC uses would simply purchase permits in the open market.

Provides Policy Flexibility

Marketable rights can give an agency greater policy flexibility. An agency can act to affect the supply of permits available on the market as external changes warrant. If, for example, an agency -- perceiving that its control policies were not progressing fast enough toward regulatory goals -- wants to lower the number of permits on the market, it can purchase them from users at market prices. Under command-and-control regulation, it would be analytically and politically difficult, if not impossible, for an agency to determine which firms would

lose their permits. Such difficulty may discourage agencies from trying to adjust the total number of rights at all.

EXAMPLE

Assume the Bay Area Air Quality Management District (BAAQMD) in California decided to attain a lower level of hydrocarbon pollution than planned when it initially allocated permits. BAAQMD would find much resistance if, say, it required a uniform reduction from all polluters, or if it tried to mandate source-by-source reductions. However, if BAAQMD purchased hydrocarbon pollution permits on the open market and retired them, firms may be less likely to complain about arbitrary regulatory policy.

Similarly, if an agency discovers that its overall limit on rights is unnecessarily stringent, it can create more rights and rely on the permit market to allocate them efficiently.

Provides Reliable Measurement of Costs

Marketable rights can also give regulators better information on the costs of their decisions, which can help them make better informed future decisions. The price of a permit represents an objective dollar measure of the true incremental costs of a particular regulation. This is because each permit-holder buys permits up to the point where the price of the next one is close to the cost of doing without it. Thus the prevailing permit price is an objective measure of its marginal value to firms. Since eliminating one permit would remove this value, the price is equivalent to the marginal cost to the economy of the regulatory restrictions. If measures of the marginal benefits of regulation are available or can be estimated, they can be compared with these objective marginal cost data and the agency can adjust the overall availability of permits accordingly.

EXAMPLE

The Tahoe Regional Planning Commission (TRPC) distributes transferable building permits by

lottery. Trading of these permits has generated a going price of $20,000 per permit, which reflects the increased value of land when it is associated with a building permit. In deciding what growth limits to set, TRPC knows that the cost to the economy of prohibiting one additional building is $20,000. It can then ask whether the benefit of one less development is worth this sum: if not, it can adjust by enlarging the number of permits in the lottery.

* * *

WHEN CAN A MARKETABLE RIGHTS APPROACH BE USED?

The applicability of marketable rights is, of course, a matter of case-by-case evaluation. However, consideration of three general preconditions can help determine whether a marketable rights approach is worth further study.

Basic Requirements

First, the problem must be amenable to control through permitting. While a system of marketable rights has some special advantages over traditional (nontransferable) permits, the two schemes share many basic requirements. For example, there must be a practical capability to detect noncompliance and to enforce permit restrictions. It also must be possible to clearly state exactly what right is being granted, how much use is permitted, any special restrictions, such as where the use is to take place, any time limit on use, and conditions under which the agency can change the definition of use. Shifting to marketable permits brings two new requirements: a) the agency must also have the capability to track who holds the permits, which may be harder when they change hands frequently, and b) the agency in most cases must have some practical way to determine what the overall amount of rights should be.

When "How Much" is More Important than "Who"

Second, marketable permits are more appropriate when the regulator is concerned more with the overall amount of an activity than with the identity of the user or the final purposes of the activity.

EXAMPLES

The Environmental Protection Agency is primarily concerned with attaining overall air quality standards. A system of marketable rights places a ceiling on the total amount of pollutants. The polluters allocate pollution emissions using the permit market mechanism. EPA is, for the most part, indifferent to which sources cut back.

The Federal Aviation Administration sets standards for certifying private pilots. Candidates must have a certain number of flying and instruction hours, and pass a written test before receiving a pilot's license. Because the FAA is concerned with the personal qualifications of the pilot at the controls, pilot licensing is not a good candidate for marketable rights.

[Note: This is not an absolute precondition. In many cases, marketable rights schemes entail some sort of government approval of permit transfers or set minimum requirements for permit holders; thus an agency is not entirely powerless to affect the ultimate distribution of rights.]

A Healthy Market

Third, the prospective permits market must be free of major defects, chiefly monopoly and thinness. If available permits are concentrated in the hands of one -- or a few -- owners, they would be able to command excessive prices on permit sales, which would lead to less economical permit use. A "thin" permits market, i.e., one with very few buyers and sellers, will result when the costs of transactions themselves are so high that potential buyers and sellers do not participate, so that the relative

advantages of the scheme are lost. A close analysis of the prospective market participants, likely exchange prices, and buyer/seller responses may be needed to discover such structural defects.

* * *

HOW DOES A MARKETABLE RIGHTS SYSTEM OPERATE?

Three key features in a system of marketable rights are the terms of the permit itself, the initial allocation of permits (by auction, lottery, grandfather, or hybrid techniques), and activities that facilitate the performance of the permit market.

The Permit

The nature of the permit is largely derived from the particular problem the regulator is attempting to solve. This makes it all but impossible to generalize about what permit conditions are appropriate. However, a review of past experience reveals some interesting characteristics of a permit that may be taken into account. One is the geographical area of use. For example, the geographical limits of a tradeable air pollution permit will depend on whether the pollutant has short-range or long-range effects.

The life of the permit is another such variable. Although a system of marketable rights confers full "ownership" of a right, the right itself may have a fixed life or it may be perpetual.

EXAMPLES

Taxi medallions in New York are permanent rights that can be willed to heirs like other personal property.

State water use permits programs use a mix of permanent and temporary permits, both of which can be traded in many States.

Lake Tahoe land development rights can be traded only within 90 days of the annual lottery.

A relative advantage of permanent rights is that they encourage permit holders to make longer-term investment decisions. Fixed-life permits also force holders into the market for new permits when their old ones expire (encouraging a fresh look at whether they need as many of the rights or can economize on them), and can make it easier for an agency to alter the overall supply of rights by retiring or expanding the number of temporary permits at their expiration date. An administrative advantage of temporary permits is that they may require less agency involvement in transfers (since less is at stake).

Stratified marketable rights schemes, in which permit markets are segmented into two or more classes, are not uncommon.

EXAMPLES

The Federal Communications Commission has considered excluding public safety agencies from having to compete with richer bidders in a spectrum auction.

New York taxi medallions are divided between individual owners and corporate owners, and crosstrading is barred.

In its slot allocation study, the Federal Aviation Administration contemplated separate auctions for longhaul carriers and regional airlines.

The practice of establishing stratified markets for rights, while risking loss of the powers of an unconstrained market, can attain at least some of the efficiency gains of permit trading while protecting participants who may find themselves at a relative disadvantage in open trading. (However, if feasible, a direct subsidy to such parties will be more efficient than the indirect subsidy of a segmented market.)

A priority system sometimes is necessary to ensure that permit holders know just what their rights entail.

EXAMPLE

The Utah State Engineer's Office processes up to 10,000 permanent and temporary transfers of water rights per year. Virtually every potential buyer has asked the State for a clear description of the

permit's relative "priority." Because of fluctuating scarcity, the State's answer has been to assign each water user a priority based on the date of the original application for a permit. Water rights are exercised in order of priority; during a dry year, a low-priority rights owner may go without water. A buyer of a marketable water right must know the priority of the permit, which does not change when transferred.

The Initial Allocation of Rights

Experience has shown that the most difficult consideration in setting up a marketable-rights system is often how to make the initial allocation of rights. Market trading will reallocate rights among buyers and sellers, but the system of initial distribution must be decided by the regulating agency. The difficulty stems from the fact that large sums are at stake. It should be noted that the method of initial allocation has no effect on the ultimate efficiency of the marketable rights approach as long as the initial allocation does not create a monopoly in permits by, for example, giving all the rights to one firm.

There are three major instruments that can be used to initially distribute rights: auction, lottery, and "grandfathering."

1) In an auction, permit seekers bid up to the perceived value of the right to them. Auctions have the relative advantage that no one is incidentally enriched by the regulator's granting of rights (except, appropriately, the taxpayer, because revenues from auctions are collected by the public agency, not private firms).

EXAMPLES

The Federal Aviation Administration has evaluated an auction system for distributing landing slots at congested airports. Airlines would bid for the 40 "slots" available in each hour. The top 40 bidders for each hour would win rights to take off or land.

The Federal Communications Commission has considered auctioning radio frequencies as an alternative to the lengthy discretionary system of granting licenses under the vague statutory instructions to serve "the public interest, necessity, and convenience."

2) Lotteries are perhaps the simplest administrative mechanism for distributing rights. The ultimate advantages of market allocation only come, however, with a second round of transactions from lottery winners to those who can get the most value from the right. [Note: Lotteries are not always free. An agency can charge a fee to winners for the use of the rights.]

EXAMPLE

The Tahoe Regional Planning Commission annually has a lottery to distribute to landowners the right to build on their property. Lottery winners pay a permit fee of $3,990 and can sell these rights to other landowners at higher market prices.

3) "Grandfathering" allocation means granting all marketable rights to those who already enjoy similar rights. Grandfathering has the advantage of causing least disruption to the status quo and avoiding distrust between an agency and those routinely affected by its rules. Grandfathering may also be somewhat inequitable, as new entrants to the rights market will have to pay for permits, while grandfathered firms obtain them free.

EXAMPLES

When New York City switched to a system of transferable taxi medallions, it "grandfathered" existing medallion owners.

The Environmental Protection Agency considered distributing marketable permits for the previously unregulated production of chlorofluorocarbons according to producers' past production volume.

4) Hybrid systems may combine the advantages of different allocation mechanisms.

EXAMPLE

The California Institute of Technology study of marketable rights for sulfur oxides pollution in Southern California contains two hybrid proposals; a "90 percent grandfather" plan and a "zero revenue auction." The former scheme

would leave current permittees free from having to buy expensive permits for most of their emissions, but would ensure a robust market by using an auction to allocate some of the rights. The latter would use an auction to allocate all of the permits, but would pay the revenues of the auction to current polluters in proportion to current emissions. This scheme allocates the value of the permits by "grandfathering," and the use of the permits on the basis of willingness to pay.

5) Other allocation techniques have been discussed, although they seem inherently less workable. One is "first-come, first-served," of which one dramatic example was the Oklahoma land rush. Another example is the allocation of air pollution permits in regions where additional emissions can be tolerated. "Catch quotas" for fishermen are still another example.

Environmental spokesmen have suggested that any marketable pollution rights be distributed equally to individual citizens, or perhaps to low-income families, from whom polluters could then purchase them.

* * *

HOW CAN THE AGENCY HELP CREATE A HEALTHY MARKET?

To help create a strong market, which is one of the pre-conditions we mentioned above for the implementation of a marketable rights regulatory scheme, an agency can play a number of roles. It can act as a distributor of information; it can monitor and enforce the terms of marketable rights transactions; and the agency also can impose direct control by establishing itself as the "gatekeeper" that approves or disapproves such transactions.

Information: A Key to Market Certainty

The agency can play a public education role, by sponsoring speeches and seminars, and by contributing articles to professional journals and trade publications. Activities such as these can

raise firms' awareness of the market in rights and encourage their participation.

Beyond general awareness, buyers and sellers need to know how to find and contact one another, the nature of the right, and its price. If this information is costly, difficult to obtain, or unavailable, the market may not function efficiently or at all. The regulating agency can help to eliminate this problem by acting as an information broker:

EXAMPLE

The Utah State Engineer's Office acts as an information clearinghouse in that State's water rights market. The Office staff learn of users with surplus water and those with shortages. Water users are encouraged to use office records, without charge, to find rights available for transfer. However, the State is not involved in setting prices.

[Note: The agency may be able to rely on others to serve as brokers. While the government's broker role is restricted to that of an information source, private sector groups, including commercial firms and trade organizations, can serve as brokers that are either commissioned agents for a buyer or seller, or as "middlemen" who buy and sell rights.

EXAMPLES

Real estate agents help make the Lake Tahoe development rights program work by aggressively ensuring that lottery winners know the value of their rights and their options. In one case, a lottery winner heard from two real estate agents before he was officially informed that he had won.

California Environmental Technology (CET) of Richmond, California, is an example of a private sector broker in the air pollution offset market. CET first contacts companies that have the largest quantity of offsets at the lowest cost. Armed with brokering commission agreements with sellers, CET locates prospective buyers and assists in negotiating contracts.

The potential for profit gives a broker powerful incentive to generate enough activity to ensure the vitality of the market.]

The Agency as Certifier and Enforcer

It is also advisable in most cases for an agency to act as certifier and enforcer of market transactions. Certification can easily be accomplished by defining the permits clearly and requiring that all transactions be filed with the agency.

Most agency administrators will want to record transactions so they know who holds current permits. As with a system of command-and-control, of course, the regulatory agency must see that terms of a permit are fulfilled. In air pollution, for example, the Environmental Protection Agency will want to guarantee that emission levels consistent with the permit are actually achieved so that regulatory goals are not undercut. Enforcement consists of ensuring that only permit holders can engage in the regulated activity, and then only to the extent allowed by the permit. Certification and enforcement of ownership rights contribute to market certainty. In many instances, the right being purchased is the key to considerable economic gain and may require a substantial private investment. Buyers want their "title" to these rights guaranteed by a clear, direct agreement. Resolution of private disputes concerning marketable rights could, as with other forms of private contracts, be handled by the courts. However, in many cases, certification of the right conferred by the permit may be an appropriate responsibility of the regulatory agency.

EXAMPLE

If a water user sells water use rights, yet continues to divert water, the buyer of the rights may need to appeal to a third party to enforce the transaction. If the water-rights transfer is filed with the State water agency, officials could have authority to close the usurper's ditches so that water would flow to the purchaser of the right.

The Agency as Gatekeeper

Agencies may also decide to be the actual "gatekeeper" for market transactions, directly approving transactions to ensure

that broader regulatory goals are achieved through the trade in rights. This gatekeeper role also allows the agency to prevent serious distortions in the market. However, its major liability is that it can open the door to unnecessary government intervention in the permit market, stripping away the advantages of a decentralized system.

Experience shows wide variation in the degree of agency involvement as a gatekeeper. The greater the involvement, some would caution, the greater is the possibility that the merits of free exchanges will be lost as centralized administrative judgments replace decentralized market decisions.

EXAMPLES

Transfers of taxi medallions are virtually never questioned by New York's taxi authority.

At the other end of the scale, the government of Puerto Rico actually participates as buyer and seller in all transactions of transferable development rights; in this extreme case, there are no direct transfers between private parties. This allows the government to make sure that each transaction comports with the government's master development plan.

Lake Tahoe's development rights program originally required prior approval of transfers by both the development agency and the city council. These requirements were found to block transfers altogether, and were later removed.

The wide range of misallocation problems that gatekeeping can address are illustrated by three examples:

1) Unfit Right-Holders: An agency may want to make sure that rights do not fall into the hands of incompetent or inappropriate parties.

EXAMPLES

The State of Kentucky checks the felony record of potential buyers before approving liquor license transfers.

The Federal Communications Commission could disallow transfer of spectrum rights to users who lack the technical ability to prevent interference to other users, or who have a record of violating technical transmission standards.

2) Undue Concentration of Rights: Agencies may need to prevent rights from concentrating in the hands of a few owners or in a particular geographical area.

EXAMPLES

The FCC has considered a "market share" rule that would preclude owners who hold a particular amount of spectrum permits from buying more.

If EPA were to adopt a marketable rights approach for controlling asbestos use, it could prevent localized "hot spots" of high asbestos contamination through gatekeeping.

3) Third-Party Effects: The possibility that trades could have undesirable effects on third parties (those who are neither buyer nor seller) can be reduced through gatekeeping and, in some cases, through public notice of proposed transfers.

EXAMPLE

State water permits in Utah can be transferred only upon approval of the State water authority and after public notice and comment. This is intended to reduce impacts on other right-holders (e.g., downstream water users whose supply may be affected).

* * *

WHAT ARE THE PRACTICAL ISSUES OF OPERATING A MARKETABLE RIGHTS APPROACH? HOW CAN AGENCIES RESOLVE THEM?

Difficulties may stand in the way of the establishment or efficient operation of a marketable rights system. Potential

problems include market defects, institutional barriers, and legal constraints. These problems can be addressed in the design of the system and the role of the agency in it.

Imperfections in the Permit Market

A market in tradeable permits may not operate as efficiently as theory might predict. There are several possible causes for this, some of which can be reduced by proper design.

1) Uncertainty

While a marketable rights approach can be, theoretically, a more efficient allocation method than direct government control, it requires active participation by buyers and sellers, and two types of uncertainty can chill permit market activity.

Insufficient information about a right or a market may create uncertainty that discourages participation. As we discussed above, a regulatory agency may combat the problem of insufficient information by itself disseminating information on market operations, the prices of rights, and potential buyers and sellers. Brokers can use this information to pursue transactions actively. Commercial or non-profit organizations can be coached by regulators and encouraged to take on the brokering role. The agency may want to serve as a central information clearinghouse for the permit market.

The fear of change in agency policy can also lead to market uncertainty that discourages participation. Potential market participants may be concerned that permits that have been purchased will lose value if regulatory policy changes.

EXAMPLE

EPA's manual for establishing air pollution emissions offset banks suggest that if "reasonable further progress" towards air quality standards slows too much, the air-control agency might:

- place a moratorium on deposits and withdrawals of pollution rights from the bank,
- raise the quantity of offsetting rights necessary for a given source, or
- forfeit all traded permits.

Such possibilities may discourage any offset trading at all by undermining the long-term value of the permit.

The "wait-and-see" attitude that can result is also demonstrated in the case of emission offset trading. With pending Congressional debate over the Clean Air Act Amendments, potential market participants perceive that national pollution policy is in flux. As a local pollution control staffer put it, "nobody in their right mind" would publicly identify their potential omission reduction at this point.

2) Market Concentration

Another factor that can contribute to market failure is that monopoly might occur if one firm finds it optimal to own a very large fraction of the permits. Also, a monopoly might be created by the initial allocation scheme if one or a few firms obtain all the permits. The initial allocation scheme must be designed to avoid creating monopolies in permits.

Two aspects of monopoly control may arise. First, a monopoly of the permits themselves can defeat the objectives of the marketable rights program, because excessive "monopoly prices" for permits will prevail and keep this rights market from working as it should. One way to guard against this is for an agency to retain approval rights over permit sales and to apply a "maximum market share" criterion to prevent concentration. Another way is to design the allocation system to undermine the monopoly power of the largest holder of permits. Generally speaking, monopoly is less of a problem in auction systems, and can be avoided by a careful choice of the initial allocation of permits.

The second monopoly problem involves the strategic use of permits to restrain trade, not of permits, but in general commerce. For example, if a television broadcaster were to gain ownership of several choice video frequencies, he could corner the local TV market; he would use market power not to extract monopoly prices in permits but to discourage competition in television services by hoarding unused permits. This latter problem is not unique to government-conferred rights and can presumably be handled by available public and private antitrust actions. An agency may want to design its rights system to discover and reveal such restraint on trade. In addition, a "maximum share" criterion may help here, too, in some instances.

3) Market Thinness

Another problem may arise if too few firms participate in the market. One cause of market thinness has to do with the costs of organizing and operating the market (called "transaction costs"). If firms must bear the costs of finding trading partners and eliciting price information, the transaction costs can be large in relation to the value of the permits, and suppress trading.

Remedies to thinness and prohibitive transaction costs include the publicity, brokerage, and clearinghouse services discussed above. An agency may also want to directly reduce transaction costs by some form of subsidy to market participants. As with monopoly power, market thinness can be overcome by the design of the allocation scheme. For example, regularly scheduled auctions for a significant share of the permits can overcome this problem.

Institutional Factors

The major challenge in establishing a marketable rights system concerns initial allocation. Due to entrenched interests, active outside interest groups, and agency tradition, any initial allocation scheme is apt to be controversial. Very large transfers of wealth may be involved. While conventional permit programs may have similar effects on wealth distribution, the large monetary transactions of marketable permits makes the sums involved explicit and visible.

Suppose a grandfather scheme is used to initially allocate rights such that current users are given marketable rights based on their current usage. Such a system confers substantial monetary advantages to those currently using the resource. For this reason, potential new entrants to the market are likely to exert pressure against a grandfather clause.

Likewise, if an auction or lottery is contemplated, existing firms using the scarce resource will exert considerable pressure to oppose this system. This is because they would lose their free property rights and confront a direct and imminent new threat to profits, if they are forced to buy permits.

Reluctance to Change

All interests on the regulatory policy scene -- industry, public interest groups, regulators -- can be expected to show

some reluctance to try any new approach. For instance, established firms who now have workable arrangements with regulators may feel that they are better off under the existing system -- should potential competitors wish to open shop, a protracted and expensive permit approval process awaits them. This obviously protects the established company.

Adjusting the Supply of Permits

We listed among the relative advantage of marketable rights the ability of a regulator to increase or decrease the total number of rights by itself putting new permits on the market or by buying up existing permits. In practice, an agency may find it difficult to adjust the supply of permits available on the market as external changes warrant. If an agency wants to lower the number of permits on the market, it could purchase them from users. While this is easier, politically, than permit-by-permit adjustment in a command-and-control scheme, it does require large sums of money to buy up permits. An alternative strategy is to limit the permits' life, and, when they lapse, to issue fewer to replace them.

Increasing the number of rights in the market may prove more difficult. If the supply of permits grows faster than demand, the value of existing permits shrinks. Owners of those permits may complain because of the decrease in permit values. For example, if the number of additional airport landing slots grew more rapidly than the growth in airline traffic, the price of a slot would drop. Airlines already owning slots would see both 1) the value of their right drop, and 2) increasing competition. However, the negative effect on current owners would be partially offset by beneficial effects on new buyers, because potential new buyers of rights would benefit from a decrease in the price of landing rights. Besides, this risk is not unique to government-created rights; few, if any, property rights are ever free of the risk of devaluation at some future date.

Public Debate Over Correct Level of Control

In some cases, a marketable rights program will raise an issue that will change the focus of public debate: What is the "correct" overall quantity of activity? A command-and-control scheme can issue permits one by one, leaving implicit (and possibly unwitting) the agency's decision as to how many permits there should be to

meet regulatory goals. This decision, of course, is central and visible in a system of marketable rights, as it should be in any approach; but it may be troublesome nonetheless.

EXAMPLE

Had the number not been historically determined, New York authorities would have had difficulty making a case that there should be exactly 11,787 licensed cabs in the city. Case-by-case review of license applications might appear to be more defensible.

If there is no agreement on the correct quantity of rights, regulators may want to stay with a workable, less efficient approach rather than chance a marginally better alternative.

Inappropriate Rewards

In some areas, there may be an objection that allocation of permits through the price system inappropriately rewards those who can afford to pay, and that equity or social considerations call for protection of the less opulent permit-seekers. One way to accommodate this case is to stratify permit markets, ensuring that disadvantaged classes have access to their own permits pool. Another way is to subsidize permit costs for favored permit holders.

Government-Conferred Profits

Finally, the public may instinctively object to the concept of profits made from government-created rights. While economists point out that speculation can improve the efficiency of a market, some observers may argue that government should not invite such activity.

EXAMPLE

The State of Kentucky uses marketable permits for liquor stores. Although the State's license fee is as low as $200, licenses are sold for up to $65,000, causing controversy about the State's contribution to speculation by "unsavory" elements.

Such opposition is also likely to arise where the original permit holder has paid little for his rights and makes windfall gains from an agency decision to adopt marketable rights. Some may see it as improper, for example, for the largest-volume polluters to accrue the largest new wealth from owning their suddenly valuable permits. Of course, the value of permits is due to their scarcity and is only made apparent (not created) by tradeability. In any case, the State can appropriate this value by selling permits at their market value, such as by auction.

* * *

WHAT ARE SOME POTENTIAL LEGAL CONSTRAINTS?

The decision to establish a marketable rights scheme is subject to any specific procedural or substantive requirements the agency's enabling statutes impose, and to tax policy.

Statutory and Policy Considerations

Agencies' enabling statutes often establish a regulatory goal without prescribing a specific method to achieve it. Generally, if the statute does not directly address the method to be used (e.g., if it does not prohibit the use of the marketable rights concept) and if the regulatory goal of the marketable rights scheme is consistent with the agency's statutory mandate, the agency should be able to implement such a scheme.

If the agency plans to collect money for a right conferred, it may need specific statutory authorization to that effect. In general, recent court cases show that in order to collect enough revenue to cover their operating costs, Federal agencies may collect user fees to offset the costs of goods, services, benefits, or privileges it supplies or confers. An agency may assess a user fee only for a benefit conferred on an individual entity and not for a benefit shared by the general public. The fee must be based on both the value of the benefit to the recipient and the costs the agency incurred in conferring it. The agency must exclude costs incurred in serving the general public good. In assessing user fees, agencies cannot collect more than the total of their operating budgets.

If an agency considers the wrong factors (e.g., value of the benefit conferred on the general public) or assigns erroneous values to the correct factors, courts may invalidate the fee. Computing a lawful user fee may prove difficult.

EXAMPLE

The Federal Communications Commission was instructed by a series of court decisions to recalculate all fees assessed between 1970 and 1976 and to make appropriate refunds. The Supreme Court invalidated the fee schedule, holding that in reality FCC was levying a tax, rather than assessing a fee (National Cable Television Association v. U.S., 415 U.S. 336 (1974)).

Agencies may collect funds exceeding their operating costs for rights conferred, if they have specific statutory authorization to do so. Traditionally, statutes authorizing such collection of funds have been confined to the sale or lease of rights to use Federally owned lands and scarce natural or public resources. For example, the Bureau of Land Management and the Geological Survey both generate revenues that exceed their operating budgets from offshore oil and gas rights.

EXAMPLE

For use of public lands and their scarce natural resources (e.g., timber use and grazing rights), the Federal Land Policy and Management Act authorizes the Government to "...receive fair market value... unless otherwise provided for by statute " (43 U.S.C. §1701 (a)(9)).

However, to generate revenue from markets in other types of rights, new legislation may be required.

EXAMPLE

The Federal Communications Commission believes that it needs new legislative authority to allocate spectrum use through a system of auctions or fees because the spectrum has not been traditionally considered a scarce public resource.

Another legal issue -- as well as a practical one -- is the disposition of money paid to the government in a rights auction or sale. These sums could be very large.

In sum, if the statute specifically and affirmatively authorizes the use of the marketable rights concept and the collection of funds, there will be less opportunity for legal challenge. An enabling statute that does not directly address the subject may create ambiguity but should not serve as an absolute prohibition of marketable rights use.

Tax Policy

The tax treatment of marketable rights may have important effects on the incentives provided by the marketable rights scheme. This is because businesses make decisions on the basis of after-tax costs. Marketable rights are nothing more than certificates of ownership of capital assets that are used in the production of goods and services by the owner. Thus, in principle, the marketable rights themselves, and the costs associated with obtaining them, should be treated in the tax code the same as other capital assets. If the tax treatment of marketable rights is exactly the same as other capital assets, then the owner's decisions about whether to buy (or sell) marketable rights or pursue alternative means of meeting the regulatory goal is not distorted. On the other hand, if marketable rights receive preferential tax treatment, then firms have a perverse incentive to use too many rights and not spend enough on alternative means of meeting the regulatory goals, and vice versa.

Thus, the rules for depreciation of marketable rights should ideally be the same as for other capital assets. Similarly, the transaction costs of obtaining a marketable right should have the same tax treatment as the costs of obtaining any other similar asset. Normally, such costs can be deducted annually as an ordinary business expense. Finally, possible capital gains (and losses) associated with buying and selling marketable rights should be taxed in a manner similar to capital gains for other assets.

However, there have been several rulings with similar types of government-created property that complicate the question of how marketable rights would be treated under the existing tax system. Case-by-case review may be required.

EXAMPLES

If a broadcast station is succesful in obtaining a license for the use of a channel, its costs are considered capital expenditures for securing an asset of a permanent nature; the expenditures are not immediately deductible as a business expense. But if the station does not obtain the license, the expenditures are deductible as a loss (Rev. Rule 56-520, 1956-2 CV 170).

Expenditures for competitive Federal and State government oil and gas leases, in most cases, are treated as delayed rents rather than capital expenditures.

Depreciation is not allowed for the cost of obtaining the use of a television channel that is periodically renewable by the Federal Communications Commission, because useful life of the asset is of a permanent nature (Rev. Rule 56-520 1956-2 CB 170). However, a portion of the cost of buying a station that is attributable to its physical assets, and not its license to operate, is depreciable, but not deductible as a current expense (WBSR Inc., 30 TC 434).

Expenditures for liquor licenses (Rev. Rule 70-248, 1970-1 CB 172) receive tax treatment similar to other types of nondepreciable capital expenditures.

Public Policy for Utilities

In many cases, major participants in a permits market are utilities that are subject to regulations regarding prices, profits, and the requirements to maintain adequate service.

Examples are the use of frequency assignments for satellite and microwave transmissions by telecommunications utilities, and pollution permits by electric utility generation facilities. Cost-accounting procedures of utility regulators are crucial in

determining the incentives of a utility to rationalize its participation in a permits market. Moreover, utility regulators must have some assurance that utilities will obtain sufficient permits to provide adequate service. Widespread blackouts or disruption in communications will not be tolerated if a utility errs by purchasing too few permits.

* * *

PART II

AGENCY EXPERIENCE WITH MARKETABLE RIGHTS

This section gives detailed descriptions of 10 examples of marketable rights currently in place or under active consideration by agencies. The examples show the rich variations in the way that agencies use marketable rights. These examples are included for illustrative purposes only; no attempt has been made to evaluate the merit of each action.

THE LAKE TAHOE "RANDOM SELECTION"

Lake Tahoe Basin, straddling the California and Nevada State lines, has experienced a development boom in recent years. The lake is becoming polluted. The Tahoe Regional Planning Commission (TRPC), in conjunction with surrounding counties and towns, has chosen to limit growth. Allowable growth is determined by limits on sewer capacity. In 1977, TRPC chose to not build new sewer plants, and calculated the number of additional houses that could be accommodated by existing sewer facilities. A committee arbitrarily allocated building permits the first year. During 1978, resistance to this procedure led to allocation of building permits by lottery. Landowners could enter by submitting their names. Once a parcel had been used to enter the lottery and awarded a permit, the parcel could not be reentered. By not allowing a parcel to be reentered in the same lottery, TRPC guarded against the possibility that any one individual or firm could benefit too often from the lottery. TRPC found this policy equitable for all concerned. If the landowner did not "win," he could reenter the parcel in the next year's lottery. Only a percentage of the growth potential was allocated each year, averaging 200 permits each lottery.

Simplifying the System

After "winning" a building permit, the landowner had his or her land inspected by county authorities to determine its potential as a building site. Many complaints erupted when a landowner, pleased over having "won," then was told he had a worthless permit because his land was inadequate. ("Inadequate" may refer to the fact that it would be environmentally unwise to build a house on the site because, for example, the land may be too wet to support a sewer system or a house.) As rules stood in 1979, he could not sell the permit.

In 1980, this rule was altered to allow building permits for "unbuildable" land to be sold. A landowner had to present a case for a transfer before both TRPC and the city council. The regulatory maze was such that no permit was ever sold. Complaints continued piling up.

In 1981, all permits were made transferable, and TRPC involvement was no longer required. Whether or not his land is buildable, the holder of a building permit now can sell the permit together or separate from the parcel of land. The only restriction is that the permit be transferred to land rated at least as suitable for building as the original site. The market value of the permits may be up to $20,000.

Realtors are acting as unofficial brokers in building permits. One lottery winner heard from two realtors even before he was notified by TRPC or the city.

The marketable rights building permits approach is proving to have several advantages at Lake Tahoe. First, the political dissatisfaction is reduced. Losers in this year's lottery may win next year, and winners with unbuildable land can sell the permit. Second, because owners of the most desirable land will bid high enough to receive permits, the marketable rights approach ensures that the best land is developed first.

A problem with Tahoe's marketable rights system stems from the 90-day building rule. A South Lake Tahoe city ordinance requires the building permit to be acted upon within 90 days of the lottery because the physical attributes of the property -- such as the water table -- may change. This rule leads to an annual drying up of the market in building permits.

The rule leads to hasty decisions about architectural plans and has resulted in some half-built, abandoned structures. This rule is not generic to the market system. If removed, permits would remain on the market for a prolonged period, accommodating future builders as well as increasing the likelihood of the permits being used to build on the best land.

Contact: Jack Frederickson, City of South Lake Tahoe, CA, Allocation Office, (916) 542-0653.

AIR POLLUTION -- MARKETABLE RIGHTS AND BANKING

The Clean Air Act Amendments of 1977 require EPA to encourage States to address the problem of air quality in those areas in the country where the pollution level is above national standards. EPA's 1976 ruling on industrial growth in these "nonattainment" areas allows a new source of pollution to be built <u>only</u> if its owners find sufficient new emission reductions so as to more than "offset" the amount of new pollution. Thus, a market between new and existing pollution is established. Profitable business expansion is permitted through the use of this tradeoff mechanism. Polluters are encouraged to further reduce emissions as much as possible in order to create these profitable pollution offsets to be sold or exchanged to new or modified sources of pollution.

A system of pollution offsets (or emission reduction credits) has several advantages. First, the responsible air pollution control authority can achieve more emission reduction for less

cost. Second, polluters have incentive to invent and use better pollution control technology in order to generate valuable offsets. Third, further progress towards air quality standards is maintained while economic growth occurs, due to the rule that requires more than a one-to-one offset ratio for new or modified pollution sources.

Information Dissemination and the "Offset Bank"

A major early problem with the developing market in pollution offsets was the lack of information for potential buyers on price and availability of offsets. Also, creators of offsets were inclined to keep them off the market to provide for their own future expansion.

To meet these shortcomings, EPA devised its "banking" policy. Banking allows trading over time by encouraging sources to create extra emission reductions, have them certified by their State air pollution control agency, and store them for their own future expansion, for sale to new sources needing offsets, or for cost-saving internal changes in pollution control, such as a firm might achieve under EPA's "bubble policy." (The bubble policy allows polluters to measure emissions from multiple sources, as if they were enclosed by an imaginary bubble.) Firms are thus encouraged to reduce emissions as much as possible in order to create these profitable and tradeable offsets.

For example, if a source is required to limit its annual hydrocarbon emissions to 1,000 tons a year but finds it could reduce its emissions to 700 tons, it could bank the additional 300-ton reduction. If area firms later needed to increase industrial capacity, or if a major new facility wanted to locate in the area, these banked emissions would be available to offset emission increases and avoid decreased air quality, while planned economic growth was realized.

Pros and Cons of an Offset Bank

Simply stated, a bank consists of a set of rules for determining who can get credit for extra reductions, what actions will produce credits, how much credit can be gained, where or when resulting emission reductions credits can be used, and how to use them. A formal banking system creates a continuing incentive for companies to do more than required when they are replacing current control equipment or meeting new control requirements, since the cheap

extra reductions created become valuable commodities. Also, the system will produce a central registry of extra reductions, cut permit delays by allowing reductions to be certified in advance of their use, and let firms treat emission reductions like any other inventory item, to be stockpiled wherever their carrying costs are less than the expense of producing them "as needed."

Once it has established such a bank, a community will have a competitive advantage in attracting new industry or promoting major expansion by existing firms. A bank can cut firms' costs and management frustrations. Established firms in the community will be able to quickly and efficiently determine whether or not it should be simpler or less expensive to buy a pollution credit from the bank.

Emissions banks can be run for profit, or they can be publicly managed, most probably by local air or economic development agencies. Banks also may provide active brokerage services to help extend the efficiencies of controlled trading to smaller firms and make the market more liquid.

The pollution reduction market is already developing banks. By August 1980, San Francisco, Seattle, and Louisville had full-scale banks in operation. Fifteen State and local areas are developing banking systems. Even without such formal institutions, many companies have inventoried reductions or potential reductions both to safeguard future growth and to phase control investments in a more economic manner than existing regulatory deadlines allow.

Little opposition has been voiced toward the concept of the bank. Some environmentalists fear, however, that the banking rule may provide a loophole to avoid compliance with air standards. There are concerns that without limits on how long offsets may be banked, sources may hoard their offsets indefinitely. When this occurs, new sources are lost for a lack of offsets, and offsets will represent only paper trades.

Cite: 44 FR 3280, January 16, 1979 (Banking).
Contacts: Steve Seidel, (202) 382-2773;
John Palmisano, (202) 382-2714.

A MARKET IN STATE WATER RIGHTS

Western water permits offer an example of marketable rights at the State level. Originally, water rights could not be transferred. However, the character of the West's economy since the initial water allocations has shifted from agriculture toward

industry and recreation. Western States began recognizing around 1900 the need to avoid locking the region into a pattern of water use that is no longer ideal. Utah, Washington, and Idaho allow both temporary and permanent transfers of water rights as a means of obtaining the most benefit from available water resources. Other States permit only permanent transfers.

In the West, an individual wishing legal access to water (e.g., to tap a public body of water for irrigation of his crops) files an application with the State water resources agency. The water itself is not the property right. Instead, the right is permission to use a specific quantity of water for a particular purpose, in a particular location. Each permit has a specific priority ranking, determined by the application filing date. The permit holder might not receive water if the available supply is exhausted before his ranking permits him to use his water rights.

The States approve all water rights transfers. Government involvement has been justified by the view that water is the property of State citizens, held in trust by the water resources agency. The State agency, as trustee, monitors water use to see that resources are used in a manner consistent with the State's welfare and according to permit specifications. Recognizing the critical role of water to a user's livelihood, a State also attempts to guarantee the user's rights. This assurance involves both clear priorities of use and protection against injury from other users. This injury may result from one user's actions adversely affecting another user's property -- for example, a user may divert water away from areas where it is needed. Over 50 percent of water diverted for agricultural use returns to the hydrologic cycle and is available for other users. Transfers of water to a different location could diminish these return flows (that is, the portion of diverted water that is not used and is returned to its original source or another body of water) and impair the rights of others. State involvement is intended to minimize these third-party effects.

Trading Water Rights

When an individual wants to transfer a water right, he applies to the State water resources agency for permission. Newspaper notices and public hearings provide opportunities for protest. Approval or rejection is dependent primarily on 1) whether other users will be adversely affected by the transfer, and 2) whether the proposed new use would be consistent with the State welfare. Temporary transfers are more quickly acted upon than permanent transfers. Some States' water resources agencies also act as information clearinghouses to expedite links between current and would-be permit holders. Both temporary and permanent transfer statutes

are frequently used. State administrators believe that exchange of water rights is producing additional benefits from the resource, stemming from incentive to use water efficiently. However, several aspects of the water market as it currently exists prevent it from being used as efficiently as possible. First, bringing users with surplus water together with those with shortages requires more information than is frequently available. The State of Utah tries to assist in the supply of information by keeping track of those users who take less water than they are allocated. This information is available to those users with shortages so that potential trades are made easier. Second, questions of injury to other appropriators prevent many transactions which may have net positive benefits. Water transfers create third-party effects because users of water depend in part on the return flows of other users. Injury occurs when a user diminishes the return flow so that the groundwater aquifer (underground reservoir) has less water for the next user. Third, State water administrators are sometimes suspicious of a water market that may allow an individual to make a profit exchanging a public resource and are thus slow to approve transfers.

Despite the fact that the theoretical maximum of efficient use has not been reached, the possibility of transferring water rights has definitely resulted in greater benefits, including the conservation and more flexible allocation of natural resources. Making water rights transferable leads to increased efficiency of water use because of new financial incentives to avoid waste. A water user would be encouraged to use his appropriation efficiently, because any surplus water he had could be rented or sold. Thus the use would provide the user a direct financial incentive to use water efficiently.

Utah

Cite: Utah Code Section 73-3-3.
Contact: Dee Hansen, State Engineer's Office, Salt Lake City, (801) 533-6071.

Washington

Cite: RWC Section 90.03.390.
Contact: Gene Wallace, Department of Ecology, Olympia, (206) 753-2800.

Idaho

Cite: 42-103, Section 42-201 (1977).
Contact: Dave Puthill, Department of Water Resources, Boise, (208) 334-4440.

TRANSFERABLE DEVELOPMENT RIGHTS IN NEW YORK CITY AND PUERTO RICO

Transferable Development Rights (TDR) is a land management technique to prevent overdevelopment. Under the TDR concept, a property owner retains ownership of his land but sells his rights to further develop it to another landowner who can use the permit to exceed the density permitted on his land under the applicable zoning. The development rights are separate from the land ownership and are viewed as a separate article of private property that can be shifted from one parcel of land to another and from one landowner to another. Once transferred and used to further develop the transferred parcel, the rights cannot be reobtained or used in the future by the original transferor. Development rights can be bought, stored or banked, and sold until they are actually used to develop a piece of property.

Development vs. Preservation

In the early years of U.S. history, when land appeared to be an unlimited commodity, a landowner was not restricted in the use of his or her property. Zoning was largely implemented on the premise that all land in private ownership was developable. However, the public's growing concern over environmental problems and the disappearance of historical landmarks, open space, scenic areas, agricultural lands, and aquifer recharge areas, accompanied by increased pressures for more development, has resulted in increased governmental control of land use. Preservation of valuable open lands or historical landmarks can be accomplished by conventional zoning, but rezoning already developed land for preservation purposes can be unlawful if just compensation is not provided to offset any decrease in value that the landowner suffers. Public entities do not have sufficient funds to provide just compensation for taking large amounts of private land. Consequently, recent court decisions have tended to place decreasing emphasis on the necessity for just compensation. TDR and other such innovations are seen as a way of resolving the conflict between the public interest in limited development and the rights of private property owners. TDR also can curtail the financial inequities that stem from increasingly strict land use regulation.

Public and Private Systems

TDR systems vary widely according to the particular interests and needs of the public implementing entity, but there are two basic types: 1) private-, and 2) public-market systems. Private-market

TDR systems involve establishment of a voluntary market in which direct voluntary transfers of development rights among property owners are determined by supply and demand, with little or no government intervention. Most TDR plans are based on this premise. They are not completely free markets, however, for they are regulated to varying degrees and combine elements of private markets with public supervision and control of individual transactions. For example, the Puerto Rico Planning Board set up a public development rights bank to buy private development rights, store them, and sell them according to demand.

A Private-Market TDR in New York City

The best-known private TDR plan was enacted in New York City in 1968 for the purpose of preserving historic structures while also increasing tax revenues. Owners of such landmark structures can sell their unused development rights (i.e., amount of floor area permitted by zoning but not used by the landmark building) to owners of other properties who can then increase the floor area in their buildings up to 20 percent over existing zoning. (Even the 20 percent limit was later revoked for the highest density commercial districts.) A seller of development rights can sell all his rights to one buyer or can partition his rights and sell parts to more than one buyer. Initially, the properties involved were required to be contiguous, but the definition of contiguous has been broadened to allow the transfer of development rights to spread over several blocks where there is a chain of ownership (i.e., the same individual owns all the buildings in an area). This transfer system protects neighborhoods and controls growth because development is spread out and not concentrated in one specific area.

A Public-Market TDR in Puerto Rico

An example of a public system, the Puerto Rico Plan, does not allow direct transfers of development rights among private property owners. Rather, the Puerto Rico Planning Board acts as buyer and seller in all development rights transfers, purchasing the development rights of property owners in Protective Environmental Zones (PEZs, as predetermined by the Planning Board) and obtaining funds for such purchases primarily through the sale of development rights in other areas. These development rights have no single definition, and range from permission for property owners to develop their land more intensively, to actual purchase by the Board of land to be sold for major private land development projects. The price may be set in the open market by public bid procedures or determined

by direct negotiations between developers and the Land Administration.

Other examples of TDR plans include the use of TDR to preserve agricultural lands and open space. Development rights can be calculated on the basis of the unused density permitted by the existing zoning, the assessed market value of the property, or the number of acres. Local government can adjust the supply of development rights by changing the zoning laws to reduce or increase the level of development permitted, or by buying development rights to decrease the number available on the market.

The Equilibrium Problem

The major problem with market operation in the area of development rights revolves around the necessity for equilibrium in the markets for land and development. There must be buyers -- landowners who wish to exceed zoning limits and are willing to pay a premium to do so -- and the buyers' land must be in areas that can handle increased development. Strict limits on transactions, such as a requirement that the parcels be contiguous, result in reduced demand and usefulness.

In addition, each method of calculating available rights raises equity questions. If development rights are calculated on the basis of unused density, inequities may arise because economic pressures for the unused zoning density vary considerably among parcels of land with equivalent zoning; if they are calculated on the basis of assessed values, inequities may result due to assessment biases from property to property; and if they are calculated on the basis of acreage, inequities may result because owners of land with little development potential would receive the same number of rights as owners of land with much potential. To some extent, however, it may be possible to control the market by zoning changes or by use of a development rights bank.

Contact: Norman Marcus, New York City Plannning Commission, (212) 566-8569.

NEW YORK CITY'S MARKET IN CONVERSION RIGHTS

The New York City Planning Commission has set a certain ratio for residential and industrial uses of buildings in the area of the City known as "East Chelsea," bordered by Park Avenue, 8th Avenue, 14th Street, and 23rd Street in Manhattan. Each building is assigned a number of "conversion rights" that can be traded between buildings.

East Chelsea has been a mixed residential/ light industrial area for several years. Industry in the area is primarily garment manufacturing and printing. The area currently provides 30,000 to 40,000 jobs. Recently, old industrial buildings have become popular as converted residential units. The Planning Commission was afraid that the conversion of industrial property to residential would depress the employment level of the area. The Commission proposed in early 1981 that only a part of each building be available for residential conversion, never to exceed 50 percent. The ratio was based on historical precedent for the area. This was viewed as a way of accommodating the drive towards residential conversion while retaining an economic base.

Controversy and Compromise

The proposal to have only portions of a building available for residential conversion was vehemently opposed by both the industrialists and the developers. The developers said the proposal would depress the market for converted units. Industrialists said the proposal constituted a 'foot-in-the-door' for residential conversion and expressed fears that they would soon be forced out of their buildings.

The New York City Planning Commission amended its proposal in April 1981 by allowing the rights to be transferred, enabling some buildings to become wholly residential while others remained industrial. According to Norman Marcus, General Counsel for the Commission, there has been no opposition to the amended proposal: "We have a beautiful compromise."

How the Plan Works

Buildings in the area are assigned a specific number of conversion rights, measured in floor space. The number of conversion rights varies from building to building, never exceeding 50 percent of total floorspace. The number of rights assigned depends on

room sizes, elevators, floor load capacity, ceiling heights, and column spacing.

The owner of a building can either use his rights to partially convert the building to residential use, buy additional conversion rights, or sell his rights to another developer. Rights can only be transferred to buildings with equivalent potential for industrial use (as determined by similar room sizes, number of elevators, etc.). If an owner sells his conversion rights, the property has changed ownership. The fact the property has had its coversion rights sold is recorded in the legal title.

The City's Role

The New York City Planning Commission has a limited involvement with the market in conversion rights. The Commission determines the number of rights for each building, and oversees the statement concerning the transferred rights that is added to the property's legal title. The Commission also determines if the proposed trade is between buildings with similar potential for industrial use. The Planning Commission does not get involved in bringing buyers and sellers together, setting prices, or other market functions.

The New York City Planning Commission's system of transferable rights is believed to distribute among owners the benefits of rising property values due to conversion potential, whether or not the property is actually converted. The possibility for employment in the area is retained. Residential needs are addressed.

The conversion rights policy was developed as part of the New York City Zoning Code, and conversions are consistent with the light industrial/residential classification of the area.

Marcus has seen no disadvantages with the policy. The quantity of industrial space and jobs in the area will diminish, but Marcus believes that the reduction is minimized by this policy.

The market in conversion rights was established in April 1981. In the four months since, three applications have been submitted and are pending before the Planning Commission. The time involved in receiving approval of a transfer is primarily due to the need to confirm equivalencies between the buildings involved.

Cite: New York City Zoning Resolution 74-79.
Contact: Norman Marcus, General Counsel, New York City Planning Commission, (212) 566-8569.

A MARKET SYSTEM TO ALLOCATE LANDING SLOTS

For safety reasons, airports have many limitations imposed on their operations -- among them, limits on the rate of landings and takeoffs. The Federal Aviation Administration (FAA) and the Civil Aeronautics Board (CAB) have studied marketable rights as a way to allocate takeoff/landing slots among airlines.

Currently, four airports, due to traffic congestion and related problems, operate under special FAA "high density rules." These rules limit the number of takeoffs and landings that may occur per hour and require that commercial airline operations be allocated by special "scheduling committees" of airline representatives. The scheduling committees work under a special grant of antitrust immunity, and the agreement reached by the scheduling committees were approved routinely by the CAB. The affected airports are Chicago (O'Hare), New York (JFK and LaGuardia), and Washington (National). Atlanta (Hartsfield), Los Angeles International, Denver (Stapleton), Boston (Logan), and San Francisco International are among a number of airports which could be similarly affected by 1990.

Scheduling Committees -- A Chill on Competition?

Discretionary allocation by scheduling committees has created problems. First, the committees distribute valuable rights at no cost to the recipient. An airline in possession of a slot has incentive to retain it for possible future ridership expansion, even if it means, in the interim, flying nearly empty or using small planes at peak hours. This could lead to an inefficient use of airport resources. Second, an airline could slow the entrance of competitors by holding underutilized slots.

Although subsequent schedule allocations would most likely correct this problem, the delay could temporarily negate the competitive flexibility gained under airline deregulation. Third, the scheduling committee procedure provides no incentive to carriers to shift flights to off-peak hours or to underutilized nearby airports.

The Auction Option

The FAA has studied several auction methods for Washington National Airport. One method was used for an experimental simulation of slot auction, with the participation of airline representatives. The general idea of the auction is to accept bids for slots at

each hour of the day. The bids for each hour would be ranked from highest to lowest bid and the top 40 bids, for example, would qualify for the 40 available slots. A carrier that bids successfully would then have to pair this slot with a compatible slot at another airport in order to move its plane between cities. It would also have to pair each slot to be used for a landing with a compatible slot for a takeoff at the same airport. If it could not get the slots needed for a flight, then the carrier would be able to trade.

Auction Could Help Market Efficiency

In theory, the auction of slots could more competitively and, therefore, more efficiently distribute the slots because such a system would force the decision to acquire or retain a slot to be more directly related to the expected, near-term value of the service to be provided. Peak-hour traffic could be redistributed (as airlines try to avoid paying top prices for peak-hour slots), and neighboring airports (e.g., Dulles International and Baltimore-Washington International, in the case of Washington National) could enjoy more business, particularly if their landing and takeoff slots were not subject to the auction system. The auction method also could help to internalize the costs of air transportation that are imposed on external parties. For example, if, to reduce noise impacts, airport neighbors were willing to pay more than the expected profit for flights at certain hours, an auction could permit these neighbors to purchase "slots" to prevent their use, or to be used as bargainng chips to encourage noise reduction. However, this would require opening the auction to all potentially interested parties, which could lead to considerable difficulties in administering the auction.

This system has several problems. First, the Federal Government may not be allowed to assess fees that are not based on the Government's administrative costs. This legal question has not yet been resolved.

When they exceed the requirements for operating and maintaining the airport, the proceeds of the auction should be used for expansion of airport capacity and improved ground access. That is, to achieve the efficiency and related benefits expected from introducing competitive market mechanisms to the allocation of scarce runway/airport capacity, the supply side ought to be able to respond to market signals by adjusting the supply of runway/airport capacity up to the level that would be supported by the prices users are willing to pay. Where the supply of capacity is constrained, by whatever forces, the auction could give the airport operator excess profits, i.e., economic rent, which indicates another kind of economic inefficiency.

Protecting Small Carriers and Communities

Auctions of landing and takeoff slots raise another issue: large air carriers could outbid smaller carriers, thereby excluding small carriers from major airports. This issue might be resolved by dividing the available slots between large carriers and small carriers and holding separate auctions for these categories. Additionally, because long-haul, densely populated markets have the highest profit margin, an auction system might encourage airlines to stop serving smaller communities. Both of these concerns have potential implications for the structure of the industry and the profile of air transportation services provided by a given airport.

In its slot auction experiment for Washington National Airport, the FAA addressed this problem by suggesting that the slot market could be divided into three market categories based on airport size (large, medium, and small), or even further divided into "submarket" categories based on distance from Washington, geographic quadrant (New England, Southeast, etc.), or city airport size. A number of slots for each submarket would be determined, and these would not be tradeable among the various submarket categories. However, too fine a subdivision would limit the ability of market forces to affect the allocation, negating the efficiency benefits of the auction. This problem is still under study.

Allocation of scarce resources such as landing slots through the marketplace does not always lead to consumer benefits. Carrier costs would be likely to increase as carriers pay for slots that are now free of charge. This increase would likely be reflected in fare increases of up to $20 for peak hours. Also, auctions that affected foreign carriers' ability to obtain slots at U.S. airports could be violations of bilateral agreements and could lead to retaliatory actions against U.S. carriers serving foreign countries.

Cite: 45 FR 69403, October 20, 1980.
Contact: Edward P. Faberman, (202) 426-3235.

USING LOTTERIES FOR SPECTRUM ASSIGNMENTS

The Federal Communications Commission (FCC) faces the problem of how to most efficiently and equitably allocate the use of the electromagnetic spectrum among competing uses. (Electromagnetic spectrum refers to the complete range of frequency of electro-

magnetic waves, from the lowest to the highest frequency -- radio to cosmic ray waves.) The staff of the agency, believing that some radio communications frequencies are used inefficiently (some are overcrowded and others are not used at all), is evaluating a market approach for spectrum assignments involving lotteries and freely transferable use rights. Public Law 97-35, enacted on August 13, 1981, gives the FCC the authority to choose among competing mutually exclusive applicants using a system of random selection (i.e., a lottery).

Fears and Facts

Market approaches or alternatives to existing detailed regulation are controversial because many people believe they require the Government to charge for the use of the spectrum through auctions or fees. Current licensees believe these approaches would mean paying for something they now receive for free. In addition, they fear they might also receive less spectrum than they do now, which would impose further costs of adjustment or crowding. However, some FCC staff believe that a market approach would reduce the number of restrictions imposed on licensees by the agency and would give licensees more freedom in deciding how they use their frequencies. Rather than relying on the Government, lotteries and transferable rights rely on competitive market forces to allow business to provide the services users desire.

With a lottery, a winner could use the right or sell it to another applicant who may value the right more. Lotteries could result in much more rapid use of the spectrum since there would be no need to hold long hearings or to await the outcome of a series of court appeals, as often occurs under the present system, before the spectrum would be used.

Incentives for Innovation

FCC is considering allowing users more flexibility in how they may use the spectrum that will give some users additional incentives to develop new technologies and new services. If carriers are given less restricted rights to their spectrum, the stimulus to improve technology and make more efficient use of the spectrum would be significantly stronger. Additionally, FCC is considering allowing a freer transfer of licenses and allowing users to share frequencies.

These actions give the potential user the option of obtaining a new license or buying or renting an existing one and then choosing the quality of service he wants. Some users might wish to share a

channel with many other users and accept a high level of interference, in exchange for revenues from sharing the channel. Other users might prefer to have exclusive use of a channel in order to have little or no interference. The latter user would have to pay a higher price either to obtain a channel from an existing user or to forego the revenue from the shared user of a new channel. The result would be that people could have high-quality, expensive systems or low-quality, inexpensive systems. But each user, not the Government, would decide the quality of his own system.

Some people fear that wealthy firms or individuals will monopolize the spectrum if various market mechanisms replace the Commission's current allocation and assignment processes. This seems unlikely, however, because at some point, buying up additional spectrum by any one firm would become so expensive that the firm would find it more profitable to spend its money purchasing some other asset.

However, if a monopoly condition is feared, the Commission could set up market share rules. Under this proposal, a firm would be allowed to control only a certain percentage of the spectrum.

Special Uses of the Spectrum

Another potential argument against the use of a marketable rights scheme is that certain especially important users (such as police and fire departments or educational institutions) would be unable to afford the spectrum they need or want. However, for public interest and equity reasons, a certain amount of spectrum could continue to be reserved for educational and public safety use without charge, but market mechanisms could still be used for the remainder of the spectrum by other users.

Cite: Docket No. 80-116, May 2, 1980.
Contact: Douglas Webbink, (202) 643-5940.

A MARKETABLE PERMIT STRATEGY FOR CHLOROFLUOROCARBONS

Chlorofluorocarbons (CFC) are a potential long-term regulatory problem that has been investigated by the Environmental Protection Agency (EPA). CFC emissions reduce the protective ozone layer in the stratosphere, increasing the amount of ultra-violet (UV) radiation reaching the earth's surface. Increased UV radiation

has been shown to increase the incidence of skin cancer, and is also suspected of causing reduced crop yields and marine life damage. In 1978, EPA banned nonessential aerosol uses of CFCs, which accounted for about 50 percent of total U.S. CFC emissions. In spite of the aerosol ban, CFC use is growing rapidly enough to cause significant depletion of stratospheric ozone over the next few decades, according to the National Academy of Sciences. In the event that EPA decides to further control CFCs, it could elect to do so through a system of marketable rights. This approach may be particularly well suited to CFC control, since only the total volume of emissions is important, not the point of origin. Under a marketable permits system, EPA could place a limit on the total annual production of CFCs and then distribute permits to produce or purchase this quantity. The permits would be marketable; thus, a permit-holder would have the options of using the full amount of the permits, of selling all or a portion of the permits to other firms, or of purchasing additional permits from other firms, depending on the relative economic advantages of each action. Various permit arrangements could be made. For example, production permits could be issued to CFC manufacturers, or purchase permits could be issued to manufacturers of products that use CFCs.

Marketable Rights vs. Mandatory Controls

The alternative to marketable permits is the establishment of mandatory controls which limit CFC use through mandatory controls or technology-based standards. According to a Rand Corporation study of the CFC problem, the use of traditional mandatory controls to hold emissions to 1979 levels for CFC would cost about $185 million to implement, and the marketable permits system would cost about $108 million. Thus, the marketable permits system would be 42 percent less costly to society to implement. Marketable permits also would eliminate the need for EPA to review each new use of CFCs developed, as new uses would be handled easily by the permit market when new entrants buy permits from existing permit-holders. Another attractive feature of this system is that there is a continuing incentive to all CFC users to find innovative ways (including substitute materials) to decrease their use of CFCs.

If EPA later wanted to further reduce CFC use, permits could be retired in series as they expired (permits might have a designated lifespan, such as 5 years), providing long-term incentives to develop better alternatives.

However, the initial cost to industry of acquiring permits is potentially quite large, depending on the stringency of the quota imposed. An immediate reduction from present use levels could cause transitory economic shocks since industry would have

little advance opportunity to adjust. An initial free allocation system would avoid this problem but would require arbitrary government decisions about which firms get the significant value associated with the limited number of permits. In addition, if permits are allocated to existing manufacturers rather than auctioned, new entrants to the CFC-producing industry would enter the market with a significant cost disadvantage in that they would have to purchase a permit from another manufacturer who has recieved it for free.

Major producers and users question whether chlorofluorocarbon regulation is needed at this time, since the actual rate of ozone depletion has not yet been determined. The agency is currently reviewing whether any action is appropriate.

Although the marketable permit system is an efficient approach to CFC regulation, critics are concerned about the equity issues raised by the permits. Since permits to manufacture or purchase CFCs will have an economic value, the initial allocation of permits could confer economic gains on the recipients. The ramifications of these gains are being studied.

Cite: 45 FR 66726, October 7, 1980.
Contact: Gordon Olson, (202) 755-1260.

LIQUOR LICENSES AS MARKETABLE RIGHTS

The State of Kentucky uses a marketable rights and quota system for allocating State liquor licenses. By State law, the number of licenses is limited according to population served. One package license and one drink license are allowed for every 2,500 persons in a county. The State Alcohol Beverage Commission Board set this numerical requirement because they felt it was in the public interest to limit the number of licenses available and that their action would "contribute materially to the public welfare." While the ABC Board has responsibility for awarding new licenses when there are sufficient shifts in population, in fact, most liquor license activity takes place in the market.

Minimal Restrictions

Restrictions on the sale and transfer of licenses are minimal. The Board may approve or disapprove a transfer based on the

requirements of the application regarding moral character, any felony record, and the specified site where the license will be used. While a person must show good faith in their plans to use a license, there is a great deal of flexibility allowed for speculation. Thus, even though a person's application for a new license or transfer must specify the proposed place of business, there is still the option to sell the license for profit without ever using it to conduct business. While regulations call for the use of the license within 90 days of transfer or issuance, the Board will allow a license to be dormant for up to a year.

The State fee for a liquor license ranges from $200 to $800 annually. In the marketplace, these same licenses are fetching up to $65,000. This amount is staggering when one considers that a liquor license has no collateral value, since it may be suspended or revoked by State and local authorities for a number of illegal activities (e.g., selling to a minor or gambling on the premises).

Drawbacks

The system used currently is criticized by some because of the broad discretion afforded the ABC Board in issuing new licenses and the prohibitive costs of buying a license already issued. Also, there is concern that the high costs of licenses has the effect of encouraging speculation by "unsavory" elements.

Alternative methods have been discussed in Kentucky but no proposals are presently under consideration. The idea of an auction for licenses has been discussed but it is felt that this would aid only those wealthy enough to afford the high cost of the license. Also, any effort to change the quota system would have an effect on the present values and, therefore, would be opposed by present license holders. Another alternative for the State is to charge a much larger fee for any new issuance or change in the license to more adequately reflect the true value of the license.

Contact: Judith M. Harrod, (502) 564-4850.

NEW YORK CITY TAXI MEDALLIONS CAN BE BOUGHT AND SOLD

To legally operate a taxi in New York City, a driver must possess a taxi medallion issued by the Taxi and Limousine Commission. These medallions are freely transferable, subject to Taxi Commission approval. Approval is virtually automatic if the seller has no personal judgments or liens outstanding, has no

insurance claims pending in excess of policy coverage, and if the buyer is either a U.S. citizen or a permanent resident with intent to become a citizen.

Medallions are considered personal property of the owner, and are legally treated as such. For example, if an owner dies his medallion is part of his estate (NYC Admin. Code §2311).

Protecting the Balance Between Big and Small

There are currently 11,787 medallions issued. Any increase in this number must be by authorized city legislation. Limits were initially set to reduce business competition, and union support of limits makes it unlikely that legislation increasing the quantity will be passed. Medallions are separated into two categories: individually owned (4,400) and corporate owned (7,387). Transfers cannot be made between categories. This restriction is intended to maintain a historical percentage of small versus large taxi companies. Going prices of medallions (determined by the marketplace, not by the Commission) is $60,000 for individually owned medallions and $50,000 for corporate medallions.

The historic lessons of the system of marketable rights for taxi medallions are unclear due to administrative responsibilities shifting from one agency to another. In the mid 1930s, taxis in New York City were bunched into relatively few large fleets. The mayor's office decided to provide continuity in quality of service by regulating the taxis, beginning in 1937. After a few years, responsibility for licenses was shifted from the mayor to the police department. About this time, the taxi fleets began fragmenting. Union pressures rose to both limit the number of hack licenses (or taxi medallions), and make them transferable. Unions want the transferability provision because the transfer will make medallions more accessible to small taxi companies or operators. City legislation passed in 1971 established the Taxi and Limousine Commission to oversee the market in medallions. The legislature also recognized and formalized the market in medallions that had developed since the 1930s.

Cite: New York City Administrative Code, Section 2311, 2312; Local Law #12.

Contact: Vincent Andreass, NYC Taxi and Limousine Commission, (212) 825-0415.

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PART III

ANNOTATED BIBLIOGRAPHY

ANNOTATED BIBLIOGRAPHY

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PROJECT ON ALTERNATIVE REGULATORY APPROACHES

The Project on Alternative Regulatory Approaches was a 2-year project initiated by the former U.S. Regulatory Council and completed in September 1981. The Project promoted alternative, market-oriented regulatory strategies. Alternative regulatory approaches are departures from traditional "command-and-control" regulation, which involves strictly specified rules and formal government sanctions for failure to comply.

Market-oriented alternatives avoid unneeded governmental restraints and permit greater private discretion in choosing how to meet regulatory objectives. Among these alternative approaches are marketable rights, performance standards, monetary incentives, information disclosure, and tiering.

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- Guidebook Series on Alternative Regulatory Approaches, September 1981 -- A series of guidebooks for regulators on market-oriented regulatory techniques. Each guidebook summarizes the advantages, preconditions, and limitations of a particular technique. The series comprises:

  1) Overview
  2) Marketable Rights
  3) Performance Standards
  4) Monetary Incentives
  5) Information Disclosure
  6) Tiering

- Minutes from the Project colloquium series for regulators, September 1981 -- Summaries of ten presentations by leading regulatory scholars, including Robert Crandall of the Brookings Institution, Marvin Kosters of the American Enterprise Institute, and Roger Noll of the California Institute of Technology.

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- "An Inventory of Innovative Techniques," April 1980, 47 pp. -- A description of 66 early applications of alternative approaches, written for the lay public.

Single copies of these documents can be obtained from:

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