



Marketable Permits

Committee of the Whole

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1 Marketable permits are a type of government-created license that regulates the level of a
2 particular activity.¹ Often, they ration the use of a resource (for instance, clean air by limiting
3 pollution, fisheries by limiting fish catch, or the electromagnetic spectrum by allocating it among
4 various uses), but they may also be used to satisfy affirmative obligations to engage in an activity
5 (such as requirements to produce renewable energy). Marketable permits are distinguishable
6 from other regulatory permits in that they can be bought or sold independently of any real
7 property or other interest.² Because marketable permits are alienable, it is particularly important
8 to define their longevity and the privileges conveyed by their ownership, so that parties will have
9 a well-defined understanding of exactly what it is that they are purchasing.

10 Marketable permitting programs generally fall into one of three types.³ In “cap-and-
11 trade” programs, regulators set a limit, or cap, on the total amount of activity that can take place.
12 For example, the cap could be total tons of a pollutant, total number of fish that can be caught, or
13 total number of airport landing slots. A “rate-based trading” program is similar, but instead of
14 capping the total amount of a regulated activity, agencies limit the relative amount of activity per

¹ See Jason Schwartz, *Marketable Permits: Recommendations on Application and Management* ii (March 15, 2017), <https://www.acus.gov/sites/default/files/documents/marketable-permits-draft-report.pdf>.

² In 2015, the Administrative Conference issued recommendations on the design and tailoring of regulatory permits generally, which are defined as “any administrative agency’s statutorily authorized, discretionary, judicially reviewable granting of permission to do something which would otherwise be statutorily prohibited.” Administrative Conference of the United States, Recommendation 2015-4, *Designing Federal Permitting Programs*, 80 Fed. Reg. 78,164 (Dec. 16, 2015).

³ Many of the examples in this Recommendation are drawn from marketable permitting programs in the environmental context. This is not meant to imply that marketable permits are not suitable in other contexts, nor that they are always useful in environmental contexts. A significant amount of the experience and writing to date regarding marketable permitting programs stems from the environmental area.



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15 regulated entity or unit of regulated activity. For example, a rate-based air pollution permit
16 market may limit the amount of pollution power plants can emit per unit of electricity generated,
17 and fuel efficiency standards set limits on the acceptable amount of fuel required to drive a mile.
18 Finally, in “credit trading” systems, regulators set a relative goal (e.g., no net emissions increase
19 or no net increase in property development); and then any covered entities seeking, for example,
20 to increase emissions or develop property must purchase offsetting credits that are sold by third
21 parties and verified by regulators. Credits can be earned when parties limit their level of the
22 regulated activity by more than the required amount. Credit systems can also be combined with
23 cap-and-trade or rate-based programs. For example, in a greenhouse gas cap-and-trade program,
24 unregulated sources may be allowed to voluntarily reduce their emissions and sell verified
25 credits on the market. In a property development setting, a party could decline to develop a
26 particular parcel of land to generate a credit, and then sell that credit to another party.

27 **Establishing a Marketable Permitting Program**

28 Like other agency activities, marketable permitting programs must be within the agency’s
29 statutory authority. Whether and when any given authority suffices are questions that resist
30 legal generalization and are highly circumstantial, and this Recommendation does not attempt to
31 answer them. Agency counsel will need to address them in the context of reviewing particular
32 programs.

33 Even in instances when an agency has statutory discretion to use a marketable permitting
34 program, such a program may not be the most suitable regulatory tool to achieve an agency’s
35 goal. Marketable permitting programs are more likely to be suitable when:

- 36 • The agency can clearly define the privileges or obligations to be assigned by the program
37 and has the necessary information to set the level of regulated activity.
- 38 • The agency has sufficient resources to design and administer the program and is capable
39 of reevaluating the appropriate target level of activity over time.



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- 40 • The agency finds it difficult or expensive to discern compliance costs for individual
41 regulated parties. This often occurs when the activity to be regulated is conducted by
42 numerous heterogeneous or small sources, or when there are as yet unrealized
43 opportunities for significant technological developments by actors other than those upon
44 whom the regulatory obligations fall.
- 45 • The agency is reasonably confident that a robust market is feasible. This requires interest
46 and participation by regulated entities that have, or are capable of developing, sufficient
47 knowledge to make efficient decisions in the market.
- 48 • Regulated parties have sufficiently differing compliance costs, such that the savings from
49 trading are likely to be greater than transaction costs.
- 50 • The agency cares more about overall level of an activity than the identity or location of
51 the actors engaging in the activity. Alternatively, a marketable permit system could take
52 locational differences into account in its structure, by, for example, setting prices so that
53 it costs more to buy permits in a place where marginal benefits of cutbacks are high.⁴

54 Marketable permitting programs are less likely to be suitable when:

- 55 • The balance of factors listed above is not favorable.
- 56 • The risk of unintended consequences from trading, such as the potential for highly
57 localized problems, is difficult to manage.

58 Once an agency has decided to create a marketable permitting program, it must consider
59 how to establish it. Many agencies have used notice-and-comment rulemaking when creating a
60 marketable permitting regime.⁵ In a handful of instances, agencies have established marketable
61 permitting programs through guidance documents.⁶ Since agencies cannot impose legally

⁴ For example, as with sulphur dioxide emissions from the Midwest which affect the East Coast and emissions from the East Coast which mostly blow out to sea.

⁵ Schwartz, *supra* note 1, at 27.

⁶ *Id.*



62 binding obligations through guidance documents,⁷ this latter approach can lead to some
63 uncertainty among existing and prospective permittees and even agency officials as to the
64 permanence of the program.⁸ Notice-and-comment rulemaking also has the virtue of soliciting
65 stakeholder input while a rule is being shaped.⁹ Public input can be beneficial in determining
66 whether a particular activity lends itself to regulation via a marketable permitting regime and, if
67 so, how the program should be designed so as to best serve the public interest.

68 **Allocating Permits**

69 Once a marketable permitting program has been established, permits will need to be
70 distributed. The initial allocation of permits is referred to as the “primary market” for permits.¹⁰
71 Agencies typically develop systems and regulations to allocate and keep track of permits and to
72 verify their ultimate retirement, under their authority to implement the underlying permitting
73 program.

74 Agencies predominantly follow one of two approaches in distributing permits: historical-
75 based allocations and auctions. Historical-based allocations distribute permits based on
76 historical use of the regulated activity. This method is typically used to avoid disruptions to the
77 status quo, to protect returns on past investments, and to ease tensions with the regulated industry
78 and gain political support. However, it may also reward parties for engaging in activity that the
79 agency now wants to curb, increase the risk of monopolies in the permit market, reduce the

⁷ *Chrysler Corp. v. Brown*, 441 U.S. 281, 301–02 (1979).

⁸ Schwartz, *supra* note 1, at 27.

⁹ The Conference has long advised use of notice-and-comment even where it is not a legal requirement. *See, e.g.*, Administrative Conference of the United States, Recommendation 2012-2, *Midnight Rules*, 77 Fed. Reg. 47,801 (August 12, 2012); Recommendation 1992-1, *The Procedural and Practice Exemption From the APA Notice-and-Comment Rulemaking Requirements*, 57 Fed. Reg. 30,102 (July 8, 1992); Recommendation 1982-2, *Resolving Disputes Under Federal Grant Programs*, 47 Fed. Reg. 30,704 (July 15, 1982).

¹⁰ *See* INTERAGENCY WORKING GROUP FOR THE STUDY ON OVERSIGHT OF CARBON MARKETS, REPORT ON THE OVERSIGHT OF EXISTING AND PROSPECTIVE CARBON MARKETS CARBON STUDY 12 (2011) (describing the primary market as the entry point for permits, whether entry occurs as a result of the government distributing permits directly to market participants, auctioning permits, or some combination of the two).



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80 incentive to innovate, and incentivize undesirable strategic behavior, like a firm artificially
81 inflating its use of a resource ahead of an allocation benchmark to increase its share of allocated
82 permits.¹¹

83 By comparison, distributing permits through auctions reduces the barriers to entry to the
84 regulated activity. Auctions also tend to lower the risk of monopolies and strategic behavior,
85 facilitate price discovery, and prevent undue windfalls. However, auctions can be challenging to
86 administer, especially for agencies without prior experience in doing so, and may require
87 significant resources upfront to design and implement.¹²

88 There are also several other, less common ways of conducting initial permit allocation
89 that may be useful in certain specialized contexts. These include output-based allocations,¹³
90 allocating permits to particular communities,¹⁴ or allocating permits based on other policy
91 objectives.

92 In deciding how to allocate permits, agencies must make two additional important
93 decisions. The first is to decide who is eligible to purchase permits. Some agencies restrict the
94 buying and selling of permits to regulated entities, whereas others allow non-regulated parties—
95 such as brokers, speculators, market facilitators, or the general public—to purchase permits.
96 Allowing access to the market for permits to a wider range of parties can promote market
97 liquidity and facilitate efficient price discovery, though it also increases the risk of market
98 participants trying to “corner the market” (amassing permits to control prices). Allowing

¹¹ T.H. TIETENBERG, EMISSIONS TRADING: PRINCIPLES AND PRACTICE 138–139 (2d ed 2006).

¹² Peter Cramton & Jesse Schwartz, *Collusive Bidding: Lessons from the FCC Spectrum Auctions*, 17 J. REG. ECON. 229 (2000).

¹³ Often proposed in marketable permitting programs that regulate electricity generators, output-based allocation distributes permits for pollution based on the amount of electricity produced by a given party, as opposed to the historical amount of pollution that party generated. This results in awarding permits to some of the cleanest producers of electricity, like renewable energy, rather than disproportionately to the most heavily polluting producers. PROJECT ON ALTERNATIVE REGULATION, MARKETABLE RIGHTS: A PRACTICAL GUIDE TO THE USE OF MARKETABLE RIGHTS AS A REGULATORY ALTERNATIVE 14 (1981).

¹⁴ For instance, tradable fish catch shares are sometimes allocated directly to native communities to enable them to protect their interests.



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99 unregulated parties to buy permits and retire them also allows the public to decrease the level of
100 the cap.

101 The second is whether to hold a pool of permits in reserve for future entrants. Once the
102 initial allocation of permits has taken place, in the absence of competitive markets, permit
103 holders may have an incentive to impede purchases from potential new competitors.¹⁵ Agencies
104 have sometimes addressed this barrier to entry by creating a reserve pool of permits for new
105 entrants. Some agencies have also instituted similar mechanisms for introducing permits into the
106 market in the wake of large economic changes or emergencies that heavily drive demand for
107 permits.

108 **Overseeing a Marketable Permitting Program**

109 Once initial permit distribution has occurred, agencies will want to ensure that parties
110 comply with any obligations that arise under their permits. Monitoring ongoing performance is
111 essential to achieving compliance with permit obligations. This includes tracking ownership of
112 permits through their lifecycle, tracking the amount of regulated activity by permit holders, and
113 verifying that credits represent real offsets of regulated activity. Agencies often conduct
114 compliance monitoring themselves, but sometimes rely on self-verification by regulated parties
115 or use third parties to verify compliance.¹⁶

116 In the event that regulated parties engage in more of the regulated activity than their
117 permits allow, agencies have several enforcement tools.¹⁷ For instance, agencies can require

¹⁵ For example, airlines in possession of valuable landing slots have an incentive to retain the slots for possible future ridership, rather than deciding to sell the slots to a potential new competitor.

¹⁶ In some marketable permitting programs, monitoring has been accomplished by spot checking only a small percentage of permit holders. On the other end of the spectrum, some programs require extensive measures such as third-party audits of all permits or credits annually or every few years.

¹⁷ An example of a program that has achieved near perfect compliance is the acid rain market. It features a sophisticated monitoring system that tracks pollution allowance holdings and compares them at the end of the compliance period to total emissions registered in an emissions monitoring system. It also includes stiff penalties fixed to inflation per excess ton of pollutant discharged and imposes a requirement to submit a plan for how excess emissions will be offset in future years.



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118 parties to buy additional permits until their use is in compliance with the number of permits they
119 possess and can require parties to develop plans to ensure future compliance. Agencies can also
120 impose sanctions. There is evidence that compliant parties are more supportive of enforcement
121 in marketable permitting programs because noncompliance by other parties lowers the value of
122 their allowances.¹⁸

123 Compliance monitoring and enforcement are important aspects of ensuring the integrity
124 of a marketable permitting program. Another involves overseeing secondary and derivative
125 markets that may emerge, with or without government assistance, following the initial allocation
126 of permits. The secondary market for permits involves transactions in which permits are bought
127 and sold following their initial entry into commerce in the primary market. This is in contrast to
128 derivative markets, which are primarily risk management and price discovery markets where
129 actual transfer of permits might not occur.¹⁹ Trading in secondary and derivative markets can be
130 accomplished through (1) negotiations between buyers and sellers—which may or may not be
131 facilitated by third parties (these are known as over-the-counter transactions) or (2) exchanges,
132 which match buyers and sellers in standardized transactions.²⁰

133 The authority to oversee trading of permits on secondary markets is somewhat
134 fragmented. The Commodity Futures Trading Commission (CFTC) has broad enforcement
135 authority to pursue manipulation of the price of a commodity (such as a permit) in interstate
136 commerce.²¹ It also has the authority to surveil spot trading (sales for the immediate delivery of

¹⁸ For example, in many fishery and catch share programs, fishers are reportedly more cooperative with enforcement officials after the introduction of a marketable permitting program, recognizing that illegal fishing reduces the value of their quota. Tom Tietenberg, *Tradable Permits in Principle and Practice*, 14 PENN. ST. ENVTL. L. REV. 251, 260 (2006) (citing OECD 1997).

¹⁹ Derivatives are contracts or instruments based on the value of another financial or economic interest or property and are used for hedging and speculation. A derivative of a marketable permit would be a contract or instrument based on the value of the permit. Hedging allows the transfer of market risks to parties more capable of assuming it. Speculation involves attempting to earn profit by anticipating price movements or taking advantage of a perceived mispricing. Commonly traded types of derivative contracts include futures, options, and swaps.

²⁰ Interagency Working Group on Carbon Market Oversight, *supra* note 10, at 14.

²¹ See Interagency Working Group on Carbon Market Oversight, *supra* note 10, at 43 (“Because the CFTC has broad enforcement authority to pursue manipulation of a commodity’s price in interstate commerce, the agency would have



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137 a permit) conducted on exchanges.²² However, the CFTC only rarely brings enforcement actions
138 for fraud in spot markets. The Federal Trade Commission (FTC)—under its authority to act
139 against unfair, anticompetitive, and deceptive practices affecting commerce—and the
140 Department of Justice—under its antitrust authority—also have some authority over secondary
141 permit markets, though they have had limited involvement with marketable permitting programs
142 to date. Individual agencies’ ability to oversee secondary markets will depend on their statutory
143 authority; but even when they do have such authority, they may lack the expertise or resources to
144 routinely monitor trading in these markets.

145 Authority to oversee derivative markets is largely vested in the CFTC.²³ It oversees
146 derivatives traded in exchanges, which must publish certain kinds of trading information that
147 would allow the CFTC to detect fraud and manipulation. The CFTC also has authority to
148 oversee over-the-counter transactions. The CFTC’s authority over derivative markets, and
149 particularly over-the-counter derivative transactions, was strengthened by the Dodd-Frank Wall
150 Street Reform and Consumer Protection Act.²⁴

151 Agencies with authority to oversee permit markets have various tools to combat fraud,
152 manipulation, and price volatility, all of which can undermine economic efficiency and erode
153 confidence in permit markets. Fraud and manipulation can be addressed through various
154 mechanisms, such as position limits, accountability triggers, market surveillance, and reporting
155 requirements. Position limits can be used to ensure that no single party or combination of parties
156 can control the supply of permits to the point of dictating prices. Position accountability triggers,

the authority to bring actions against individuals or entities believed to be involved in the price manipulation of allowance and carbon offsets.”).

²² For example, the CFTC oversees trading of permits for the Regional Greenhouse Gas Initiative and the acid rain market on exchanges like the Chicago Climate Futures Exchange.

²³ Interagency Working Group on Carbon Market Oversight, *supra* note 10, at 44, 51. The Securities and Exchange Commission has authority over securities and securities based swaps.

²⁴ 15 U.S.C. § 8301–08. Certain activities involving derivatives may be exempt from CFTC oversight, but CFTC has the statutory authority to eliminate many of those exemptions and to provide comprehensive oversight of derivatives in permit markets. Schwartz, *supra* note 1 at 76.



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157 which require permit holders wishing to exceed a certain threshold of permits to submit to
158 additional reporting and oversight, can likewise be used to prevent hoarding of permits.
159 Effective surveillance of markets and robust reporting requirements also discourage fraudulent
160 activity.

161 Price volatility can occur in marketable permitting programs even without fraudulent
162 activity, particularly in smaller, less robust markets with fewer participants, due to unexpected
163 increases in demand or the costs of compliance. Volatility increases the risk of noncompliance
164 and decreases confidence in the market system. Tools to address volatility include circuit
165 breakers, which limit how much prices can rise or fall in a given period, and safety valves, which
166 can set maximum or minimum prices or release reserve credits into the market in case of
167 emergencies or demand spikes. Another way to reduce volatility is to issue permits with
168 different durations. Finally, by defining a broader program that covers more entities under a
169 single market, agencies can diversify the portfolio of permit seekers, reducing the risk of
170 unexpectedly high cost in an isolated sector. Any individual regulated sector can experience
171 unexpected compliance costs as economic conditions change; a broader market offers more
172 flexibility, better absorbs price volatility, and so increases certainty for regulated parties and
173 investors.

174 Because permit markets rely heavily on the decisions of both the agency and permit
175 buyers, facilitating the flow of information is an extremely important part of a marketable
176 permitting program. Making data on permit transactions, prices, and holdings publicly available
177 can help the agency and the public assess the efficacy of the program. It also enables smooth
178 operation of the permit markets by enabling permit buyers to better evaluate the value of the
179 permits. Having clear communication policies for announcing policy changes or enforcement
180 actions that could influence the market prevents pre-publication leaks and information
181 asymmetries that could unjustly benefit some parties and undermine the permit market.

182 * * *



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183 This Recommendation does not address whether agencies should increase or reduce their
184 usage of marketable permitting programs or speak to the substantive areas in which such
185 programs may be desirable. Rather, the Conference acknowledges that agencies have been
186 directed to consider marketable permits, consistent with any applicable statutory requirements, as
187 one possible mode of regulation and seeks to identify the key considerations in assessing
188 marketable permits as a potential alternative.²⁵ This Recommendation highlights best practices
189 that agencies should consider in designing a marketable permitting program.

RECOMMENDATION

190 **Establishing a Marketable Permitting Program**

- 191 1. When designing a marketable permitting program, agencies should carefully consider
192 whether such a program will best achieve their policy objectives, and, if so, whether the
193 agency's goals would be better served by using a cap-and-trade, rate-based, or credit
194 trading system or a combination of the above.
- 195 2. Agencies should establish clear expectations as to the longevity of marketable permits
196 and the precise obligations or authorizations that they convey.
- 197 3. Agencies should generally use notice-and-comment rulemaking when creating a
198 marketable permitting regime, both in order to reduce uncertainty as to the permanence of
199 the program and to gather public input that may prove beneficial in shaping the program.
- 200 4. Agencies should consider whether to allow non-regulated parties to access the permit
201 market, enabling them to buy and sell permits. Allowing a broader range of parties to
202 trade permits can promote market liquidity, facilitate efficient price discovery, and allow
203 everyone with a stake in the outcome to participate.

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²⁵ Executive Order 12,866, 58 Fed. Reg. 51,735 (Sept. 30, 1993). Other examples of regulatory tools drawing on economic incentives include fees, penalties, subsidies, changes in liability rules or property rights, required bonds, insurance, and warranties. Office of Mgmt. & Budget, OMB Circular A-4 (Sept. 17, 2003).



205 **Overseeing a Marketable Permitting Program**

- 206 5. As with other types of permitting programs, when designing a marketable permitting
207 program, agencies should include mechanisms to ensure compliance with the program.
208 Agencies should monitor performance by tracking ownership of permits, tracking
209 regulated activity, and verifying that credits represent real offsets from regulated activity.
210 Depending on feasibility and efficiency, agencies should consider verifying compliance
211 directly, making use of self-verification, or engaging third parties to verify compliance.
212 Self-verification tends to be a useful option when verification procedures can be
213 standardized or when citizen suits are available to aid in enforcement. If an agency
214 chooses to use third-party credit verifiers, it should set standards to ensure that they are
215 qualified, insured, and free from conflicts of interest.
- 216 6. As with other types of permitting programs, in designing a marketable permitting
217 program, agencies should require noncompliant parties to have plans for coming into
218 compliance and should include sanctions with sufficient deterrent effect to discourage
219 noncompliance.
- 220 7. Agencies should coordinate with the agencies who will be responsible for oversight of
221 permit markets created by their program to determine which oversight tools are most
222 appropriate to prevent fraud and manipulation.
- 223 8. Agencies should prevent extreme price volatility by creating broad markets, issuing
224 permits with different durations, or using circuit breakers, safety valves, or reserve pools,
225 as necessary. Agencies should also consider using reserve pools to allow new parties to
226 enter the market when there are significant barriers to entry.

227 **Information Management**

- 228 9. Agencies should collect data on the operation of marketable permitting programs and
229 consider periodically assessing both the policy effectiveness and economic efficiency of
230 existing marketable permitting programs. Agencies should be cognizant that some of the



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- 231 data collected will likely be confidential and should implement procedures for handling
232 this data appropriately.
- 233 10. To the extent feasible, agencies should release data on permit transactions, prices, and
234 holdings to help the public gauge a market's policy effectiveness and to help parties make
235 efficient decisions in the market. Agencies should carefully consider what other data to
236 release.
- 237 11. Agencies that manage marketable permitting programs should coordinate with other
238 agencies that have specific expertise to improve marketable permitting programs and
239 design more efficient systems in the future. Agencies should explore formalizing
240 agreements allocating respective responsibilities or developing standards or policies
241 jointly, where appropriate.
- 242 12. In order to prevent pre-publication leaks and information asymmetries, agencies using
243 marketable permitting programs should develop communication policies for announcing
244 policy changes or enforcement actions that could influence the permit market.