

Six Principles for Integrating Non-Governmental Environmental Standards into Smart Regulation

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Ontario recently introduced environmental penalties (EPs), the environmental equivalent of speeding tickets. EPs are widely understood as part of a move toward “smarter” environmental regulation. As part of the EPs regime, facilities with an environmental management system aligned with ISO 14001 or Responsible Care qualify for reduced penalties. The Ontario government’s attempt to incorporate voluntary standards—such as ISO 14001—into its EPs regulations was not very smart, however, because it failed to observe six principles that, in our view, should guide the incorporation of standards into smart regulation. First, do not reinvent the wheel. If an existing standard fulfills the objectives of a proposed regulation, and was developed by a recognized standards body through a multi-stakeholder consensus process, it would be “smart” to incorporate the standard into the regulatory scheme as far as possible and appropriate, rather than drafting a new standard from scratch. Second, avoid unexplained discrepancies between the regulation and the standard. Third, if an existing, widely accepted standard does not, on its own, meet all of the public policy goals of the proposed regulation, indicate clearly how the standard is deficient and what more is required to meet public policy objectives. Fourth, consult relevant standardization bodies when developing regulations; they are experts on the topic. Fifth, participate in standardization processes in order to keep abreast of

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developments and influence the content of the standards. Finally, where both regulators and standards development bodies have failed to take into account the special characteristics and challenges of small businesses, they must now address these important factors. A critical period for small business and sustainability is about to unfold.

L'Ontario a récemment instauré des pénalités environnementales (PE) qui sont un équivalent environnemental des contraventions pour excès de vitesse. Ces pénalités environnementales sont largement considérées dans le cadre d'une tendance orientée vers une réglementation environnementale plus « futée ». Dans le régime des pénalités environnementales, les établissements qui appliquent la norme ISO 14001 du système de gestion environnementale ont droit à des pénalités réduites. La tentative du gouvernement de l'Ontario d'incorporer des normes volontaires telles la norme ISO 14001 à ses règlements de pénalités environnementales n'était pas très judicieuse, étant donné que cette tentative ne se conformait pas aux six principes qui, à notre avis, devraient orienter l'intégration des normes à une réglementation intelligente. Premièrement, ne réinventez pas la roue. Si une norme existe et qu'elle répond aux objectifs de la réglementation proposée, et si elle a été élaborée selon un ensemble de normes reconnues par le biais d'un processus aux intervenants multiples ayant fait l'objet d'un consensus veuillez, dans la mesure du possible, intégrer cette norme à un projet réglementaire approprié, au lieu d'en rédiger une nouvelle à partir de zéro. Deuxièmement, évitez des écarts inexplicables entre la réglementation et la norme. Troisièmement, si une norme existante qui est largement acceptée ne répond pas par elle-même à tous les objectifs des politiques publiques de la réglementation proposée, indiquez clairement en quoi elle est insuffisante et ce qui est nécessaire afin de satisfaire aux objectifs en matière de politique publique. Quatrièmement, consultez les organismes de réglementation pertinents lors de l'élaboration de règlements; ils sont des experts en la matière. Cinquièmement, participez à la normalisation afin de rester au courant des développements et de l'incidence de la teneur des normes. Enfin, les organismes de réglementation et d'élaboration des normes doivent maintenant tenir compte des caractéristiques et des défis spécifiques des petites entreprises. Une période cruciale pour les petites entreprises et la durabilité est sur le point de survenir.

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I. INTRODUCTION

IN JUNE 2007, the government of Ontario, Canada, released its long-awaited Environmental Penalties (EPs) regulations.¹ EPs are financial penalties that may be imposed by enforcement officials upon discovery of an alleged environmental violation, without having to prove the elements of an offence in court. In developing these regulations, the Ontario government made a clumsy effort to incorporate environmental management systems (EMSs) and non-governmental EMS standards into the regulatory scheme. The regulations offer a small reduction in the amount of an EP if the violator had an environmental management system in place at the time of the contravention that met the requirements of the International Organization for Standardization's (ISO's) ISO 14001 standard² or the chemical industry's Responsible Care program.³ An EMS is a set of management processes and procedures that allows an organization to identify, plan for, and manage the environmental aspects of its activities, products, and services. The introduction of EPs and the penalty reduction for EMSs were both part of an attempt to make Ontario environmental regulation "smarter" by giving regulators a wider range of enforcement options and encouraging regulated entities to adopt reflexive self-management measures. "Smart regulation" has been described as "a far more imaginative, flexible, and pluralistic approach to environmental regulation than

1. *Environmental Penalties*, O. Reg. 222/07 (enabling statute: *Environmental Protection Act*, R.S.O. 1990, c. E.19) [Final EPs Regulation]; *Environmental Penalties*, O. Reg. 223/07 (enabling statute: *Ontario Water Resources Act*, R.S.O. 1990, c. O.40). See also Ontario Ministry of the Environment, *Guideline for Implementing Environmental Penalties (Ontario Regulations 222/07 and 223/07)* (Toronto: Queen's Printer for Ontario, 2007), online: <<http://www.ene.gov.on.ca/en/about/penalties/EPguidelines.pdf>>.
2. Canadian Standards Association, *National Standard of Canada CAN/CSA-ISO 14001:04 (ISO 14001:2004), Environmental management systems – Requirements with guidance for use* (Mississauga: CSA, 2004) [ISO 14001:2004].
3. The Responsible Care program was initiated by the Canadian chemical industry in 1985 and is now a global initiative of the International Council of Chemical Associations. See Responsible Care, online: <<http://www.responsiblecare.org>>.

has so far been adopted in most jurisdictions.”⁴ It seeks to avoid “the excesses and inefficiencies of stand alone command and control regulation on the one hand and the pitfalls of deregulation on the other” by employing multiple policy instruments and regulatory actors in complementary, context-specific combinations.⁵ The goal of this article is to show that the government’s effort to incorporate EMSs into its regime of environmental regulation was not, in fact, smart. Based on the lessons learned in this case study, we propose six guiding principles for how to incorporate non-governmental standards into regulation.

The article proceeds as follows. In this part, we provide an overview of our main argument. In Part II, we define standards, environmental management systems, environmental penalties, and smart regulation, while providing some context for the issues addressed in this article. We then present our six principles in Part III, and offer some concluding observations in Part IV.

Ontario’s draft regulation caused a stir in the global standards community, even though the penalty reduction for EMSs is a minor feature of the environmental penalties scheme and applies in just one of ten Canadian provinces. What alarmed the international EMS community was not that the government would offer a penalty reduction for EMS adoption. This was generally welcomed. It was *how* the government proposed to incorporate EMSs into the regulatory system that caused concern.

Instead of integrating the leading, globally-recognized EMS standard ISO 14001 into its EPs regulations, the government effectively wrote its own detailed EMS standard from scratch. While the government’s proposed EMS model was broadly similar to ISO 14001, it was full of idiosyncratic terminology, concepts, and requirements. Implementation of the regulatory EMS would have created uncertainty and additional expense for businesses, auditors, and the government, in return for unclear public policy benefits. Moreover, at no point in the preparation of the draft EPs regulations did the government consult with the established, multi-stakeholder national committee⁶ responsible for negotiating international EMS standards and adopting them as national standards for Canada. It was only after the draft

4. See *e.g.* Neil Gunningham, Peter Grabosky & Darren Sinclair, *Smart Regulation: Designing Environmental Policy* (Oxford: Clarendon Press, 1998) at 4.

5. *Ibid.* at 35.

6. For a description of this committee, see *infra* note 61 and accompanying text.

regulations were released for public comment that the committee learned of the proposed regulatory EMS and requested a meeting with the government.

Ultimately, the Ontario government heeded the concerns of the EMS standards community and incorporated most of the national committee's suggestions into the final EPs regulations. The government's main response to the concerns was simply to delete its homegrown EMS. Instead, the regulations simply stated that to qualify for the EP reduction, a facility's EMS had to conform to either ISO 14001 or the chemical industry's Responsible Care program. This eliminated the risk of uncertainty and extra cost for regulated firms. However, it also represented a lost opportunity to engage in a serious public conversation about what ISO 14001 can contribute to the achievement of public policy goals, what magnitude of regulatory incentive it should merit, and what additional steps beyond conformity to ISO 14001, if any, should be expected from regulated entities in exchange for more favourable regulatory treatment. These questions have been raised in various fora since before ISO 14001 was first published in 1996. Serious public policy deliberation in Canada on this issue is long overdue.

As a result, Ontario's EPs regulations and the process by which they were developed provide an object lesson in how *not* to approach the relationship between standards and government regulation. On the basis of this cautionary tale, we propose six principles to guide the incorporation of standards into regulation:

Principle 1: Do Not Reinvent the Wheel

If a recognized standards development body has gone to the trouble of developing a widely accepted standard that fulfills the objectives of a proposed regulation, incorporate the existing standard into the regulatory scheme as far as possible and appropriate, instead of drafting a new specification from scratch.

Principle 2: Strive for Consistency

If a widely accepted standard already exists on the subject, do not create a host of unexplained inconsistencies between the proposed regulation and the standard.

Principle 3: Make Any Extra Requirements Clear

If an existing, widely accepted standard does not, on its own, meet all the public policy goals of the proposed regulation, identify clearly how

the standard is deficient and what more is required to meet public policy objectives.

Principle 4: Connect with the Experts

Consult relevant multi-stakeholder standards development committees when developing regulations.

Principle 5: Get Involved with Standards Development

Participate in the work of relevant standards development committees to keep abreast of relevant issues and influence the content of standards on an ongoing basis.

Principle 6: Consider the Needs of Small Business

Design regulations in a way that addresses the special characteristics and challenges of the small to medium-sized enterprises (SMEs) that represent around 98 per cent⁷ of the business community.

While the immediate focus of our analysis is environmental regulation, the implications extend well beyond the subject of EPs and EMSs to embrace broader questions about what constitutes smart regulation, what role standardization should play in smart regulation, and what role standards and smart regulation should play in meeting the challenge of a sustainable future for Canada.

The first five of our proposed principles contemplate minor, incremental reforms to the regulatory process. The sixth poses a fundamental challenge. We cannot answer these questions about standards, smart regulation, and sustainable development adequately without recognizing the unique characteristics and challenges of small business.⁸ We see small business as the sleeping giant in the sustainability story. This giant is about to turn over and shake the foundation of our economy.

Environmental regulation, for all its successes, has proven inept at solving environmental problems and promoting environmental sustainability with respect to small business. Ontario's EPs regulations are but one example of this

7. Industry Canada, "Key Small Business Statistics" (January 2008), online: <<http://www.strategis.gc.ca/sbstatistics>>.

8. SMEs are defined differently in different jurisdictions and for different purposes. They are often defined in terms of number of employees or total revenue. The line between SMEs and large enterprises is typically drawn somewhere between 100 and 500 employees. See *e.g.* Ruth Hillary, "Introduction" in Ruth Hillary, ed., *Small and Medium Sized Enterprises and the Environment* (Sheffield: Greenleaf, 2000) 11 at 13.

problem. To be fair, ISO and national standards bodies have done no better than governments at responding to the sustainability challenges of small business. This article is a wake-up call to both governments and standardization bodies to find new ways to engage with small business—and quickly. Unfolding environmental crises, such as climate change and chemical management, along with impending demographic shifts associated with the aging of the baby boom generation, mean that Canada and other countries are about to enter a period of turmoil that will truly test their understanding of—and ability to evolve toward—sustainability.

II. STANDARDS, ENVIRONMENTAL MANAGEMENT SYSTEMS, ENVIRONMENTAL PENALTIES, AND SMART REGULATION

A. STANDARDS

In this article, we use the term “standard” as it is used in the world of formal standardization. A standard is a “[d]ocument, established by consensus and approved by a recognized body, that provides, for common and repeated use, rules, guidelines, or characteristics for activities or results, aimed at the achievement of the optimum degree of order in a given context.”⁹ Standards may relate to nomenclature, measurement, design, function, performance, safety, consistency, ingredients, or any number of other attributes of materials, products, or the processes by which they are produced. They may relate to the inter-operability or compatibility of different products. They may also, as in the case of EMS standards, relate to the generic management frameworks and processes employed by organizations.

In theory, three things set standards apart from government regulation. First, they are voluntary rather than mandatory. Second, they are established by consensus among interested and affected private, public, and voluntary sector representatives. Third, they are developed outside normal public policy processes, in recognized standards development organizations. All three of these characteristics raise difficult issues. We will return to the questions of “consensus” and “recognized bodies” in Part III. The “voluntary versus

9. Standards Council of Canada (SCC), *CAN-P-1E, Accreditation of Standards Development Organizations* (Ottawa: SCC, 2006), s. 2.2 [*CAN-P-1E*], online: <<http://www.scc.ca/en/publications/criteria/all.shtml>>, quoting ISO/IEC Guide 2:2004, *Standardization and Related Activities – General Vocabulary* (Geneva: ISO/IEC, 2004), s. 3.2 [ISO/IEC Guide 2].

mandatory” dichotomy is also problematic, but we do not subject it to serious scrutiny in this article.¹⁰

Virtually every aspect of daily life is touched by standards. Standards relate to everything from screw thread sizes and bicycle helmet design to internet protocols and high definition television formats. In Canada alone there are several thousand national standards “for everything from AC meters to zirconium.”¹¹ Worldwide, the number of national and international standards is well into the millions. For all their pervasiveness, however, standards and standardization bodies keep a remarkably low profile. You may have noticed “ISO” speed ratings on photographic film cartridges, back when film cameras were in widespread use. You may have seen a logo on consumer products indicating conformity to a product standard (*e.g.*, “UL” for Underwriters Laboratories). You may even have been momentarily curious when passing a highway billboard proclaiming an industrial facility’s implementation of “ISO 9001” or “ISO 14001”—the leading international standards for quality management systems and environmental management systems, respectively. This, however, is the extent of most people’s awareness of standards.

Over the years, lawmakers around the world have incorporated reams of standards into official regulations. Hundreds of standards have been incorporated by reference into current Canadian federal, provincial, and municipal laws, from building and electrical codes, to product safety and consumer protection standards, to technical standards for oil and gas pipelines, as well as other hazardous undertakings. This phenomenon went largely unnoticed by scholars of public administration and law until the 1990s,¹² when

10. The standards versus regulations dichotomy, and the voluntary versus mandatory and private versus public dichotomies that underpin it, tend to fall apart under close examination. See *e.g.* Stepan Wood, “Voluntary Environmental Codes and Sustainability,” in Benjamin J. Richardson & Stepan Wood, eds., *Environmental Law for Sustainability* (Oxford: Hart, 2006) 229 at 248-249; Stepan Wood, “Three Questions About Corporate Codes: Problematizations, Authorizations and the Public/Private Divide” in Wesley Cragg, ed., *Ethics Codes, Corporations and the Challenge of Globalization* (Cheltenham, UK: Edward Elgar, 2005) 245. Nonetheless, these dichotomies remain central presuppositions within the standardization community. See *e.g.* Alan O. Sykes, *Product Standards for Internationally Integrated Goods Markets* (Washington: Brookings Institution Press, 1995) at 2.

11. Standards Council of Canada, “National Standards System,” online: <<http://www.scc.ca/en/nss/>>.

12. For a notable exception, see Robert W. Hamilton, “The Role of Nongovernmental Standards in the Development of Mandatory Federal Standards Affecting Safety or Health”

several developments conspired to raise the profile of non-governmental standardization and stir up questions about its role in official regulation.

The first development was the movement by standardization bodies such as the British Standards Institution (BSI), Canadian Standards Association (CSA), and ISO into the field of “generic” management system standards. This trend began with quality management system (QMS) standards in the 1980s, most notably ISO 9001, first published by ISO in 1987.¹³ Standards bodies quickly extended the management systems approach to environmental management standards in the early 1990s, and have since applied it to subjects as diverse as risk, supply chain, business ethics, food safety, occupational health and safety, and road traffic management. This was uncharted territory for standardization bodies. Unlike traditional technical standards that address the characteristics, performance, or design of specific products, generic standards address broad organizational management structures and processes. They are intended to apply generically to organizations of any size, kind, or location, and in any sector, whether public, private, or non-profit. Previously obscure standards bodies were catapulted into the academic spotlight as they addressed issues with increasingly obvious public policy stakes, such as environmental protection and occupational health and safety.¹⁴

The second development was the European Community’s adoption in the mid-1980s of its New Approach to product regulation, in which official European legislation was limited to laying down essential requirements for safety, health, or environmental protection. The elaboration of detailed requirements and test methods was left to European standards bodies. Once a product standard was published, manufacturers following it enjoyed a presumption of compliance with the legislation.¹⁵ Suddenly, European national governments

(1978) 56 Texas L. Rev. 1329.

13. There are approximately 900,000 ISO 9001 certificates worldwide. International Organization for Standardization, *The ISO Survey of Certifications 2006* (Geneva: ISO, 2007) [*ISO Survey*].
14. See e.g. Naomi Roht-Arriaza, “Shifting the Point of Regulation: The International Organization for Standardization and Global Lawmaking on Trade and the Environment” (1995) 22 Ecology L.Q. 479; Riva Krut & Harris Gleckman, *ISO 14001: A Missed Opportunity for Sustainable Global Industrial Development* (London: Earthscan, 1998).
15. Henk de Vries, “Fundamentals of Standards and Standardization” in Wilfried Hesser, Albert Feilzer & Henk de Vries, eds., *Standardisation in Companies and Markets* (Hamburg: Helmut Schmidt University Press, 2006) 1 at 14.

and consumer advocates found it necessary to focus greater attention on the little-known machinations of European standards development.

A third development worth noting was the conclusion of the Technical Barriers to Trade (TBT) and Sanitary and Phytosanitary Measures (SPS) agreements of the World Trade Organization in 1994. These agreements elevated international voluntary standards to the status of trade disciplines against which the legality of government food safety and technical product regulations would be judged.¹⁶ This development ignited controversy about standards development processes and the content of international standards. It also sparked competition among various fledgling transnational standards-setting organs for acknowledgement as “recognized” standardization bodies alongside established contenders such as the Codex Alimentarius Commission, International Telecommunications Union, International Electro-Technical Commission (IEC), and ISO.

These developments conspired to shine a spotlight on standards and standards development bodies, and prompted many observers to take a closer look at environmental management systems and EMS standards.

B. ENVIRONMENTAL MANAGEMENT SYSTEMS AND EMS STANDARDS

An environmental management system, as we noted at the outset, is a set of management processes and procedures that allows an organization to identify, plan for, and manage the environmental aspects of its activities, products, and

16. *Agreement on Technical Barriers to Trade* (14 April 1994) in WTO, *The Legal Texts: The Results of the Uruguay Round of Multilateral Trade Negotiations* (Cambridge: Cambridge University Press, 2007) 117, online: <http://www.wto.org/english/docs_e/legal_e/17-tbt.pdf> [*TBT Agreement*]; *Agreement on the Application Of Sanitary and Phytosanitary Measures* (14 April 1994) 69, online: <http://www.wto.org/english/docs_e/legal_e/15-sps.pdf> [*SPS Agreement*]. The *TBT Agreement*, Art. 2.4, provides that member states must use existing standards developed by international standardization bodies as a basis for their technical regulations, unless the standards would be “an ineffective or inappropriate means for the fulfilment of the legitimate objectives pursued, for instance, because of fundamental climatic or geographical factors or fundamental technological problems.” The *SPS Agreement*, Art. 3, requires that member states must base their food safety and animal and plant health regulations on international standards unless they can justify a higher level of protection scientifically or as a consequence of consistent risk decisions based on an appropriate risk assessment. Under both agreements, regulations that conform to international standards are presumed to comply with international trade law. See *e.g.* *TBT Agreement*, Art. 2.5.

services. EMSs were an outgrowth of quality management systems (QMSs). By the early 1990s, national and international standards development bodies had begun to develop EMS standards to offer comparability across organizations, sectors, and jurisdictions. In the run up to the 1992 Earth Summit in Rio, the World Business Council for Sustainable Development (made up mainly of leaders of large multinational corporations) called on ISO to coordinate this effort as part of the business community's contribution to the goal of sustainable development. In 1996, ISO published ISO 14001, the first international EMS standard. A second edition was published in 2004 after a five-year revision process.

ISO is a federation of 157 national standards bodies from around the world. It is the world's largest developer of international standards. As of December 2007, it had published more than 17,000 international standards and guides, totalling more than 650,000 pages.¹⁷ ISO 14001 is one of ISO's flagship standards. It was developed and revised through a delicate, decade-long international negotiation process. It has been adopted as a national standard in Canada¹⁸ and more than 140 other countries,¹⁹ and has been incorporated into the European Union's voluntary Eco-Management and Audit Scheme (EMAS).²⁰ As of January 2007, at least 129,000 ISO 14001 certificates had been issued to public and private sector organizations in 142 countries.²¹ This is only the tip of the iceberg, since there is no centralized registry of ISO certificates and many organizations use ISO 14001 to implement or improve their EMSs without pursuing formal certification.

17. International Organization for Standardization, *ISO in Figures for the Year 2007* (Geneva: ISO, 2008) at 2, online: <http://www.iso.org/iso/about/iso_in_figures.htm>.

18. ISO 14001:2004, *supra* note 2.

19. *ISO Survey*, *supra* note 13. The figure is approximate because national member bodies have no obligation to report their adoption of ISO standards.

20. EC, *Regulation (EC) No. 761/2001 of the European Parliament and of the Council of 19 March 2001 allowing voluntary participation by organisations in a Community eco-management and audit scheme*, [2001] O.J. L 114/1. See also European Commission, "EMAS – The Eco-Management and Audit Scheme," online: <http://ec.europa.eu/environment/emas/index_en.htm> [EMAS].

21. Reinhard Peglau, "Worldwide ISO 14001 Update January 2007" [unpublished report; copy on file with authors]. The total number of firms with ISO 14001 certificates is likely much lower than this because large organizations typically obtain certificates at the individual facility level.

An ISO 14001 EMS is based on a cyclical “Plan-Do-Check-Act” (PDCA) approach. An organization *Plans* to do something. It *Does* it. It *Checks* the results, and takes *Action* to correct problems, prevent recurrences, and improve future results. This cycle makes an EMS a quintessentially reflexive tool.²² If implemented in a robust and credible manner, EMSs stimulate organizations to reflect upon and systematically manage their environmental aspects and impacts. This can lead to continual improvement of their management system and business risk, including their regulatory, financial, and environmental performance.²³ EMSs can help organizations to internalize environmental issues, including environmental legal requirements, into all decision making—from high-level strategy to daily operations.

This article is not about the advantages or disadvantages of EMSs, however. We take as given that the Ontario government, like numerous other governments, believes that EMSs can offer some benefits in terms of improved environmental or regulatory performance.²⁴ Why else would it have sought to provide incentives for EMS implementation? The question for this article is how Ontario should have gone about incorporating EMSs into its regulatory scheme.

C. ENVIRONMENTAL PENALTIES

Ontario borrowed the idea of environmental penalties from the United States, where similar tools have been available since the 1970s, usually under the name “administrative penalties” (APs). APs were introduced to allow government officials to issue relatively modest financial penalties for minor environmental violations without incurring the time and expense of a full-blown investigation, prosecution, and trial. Before APs, environmental law enforcement boiled

22. Eric W. Orts, “Reflexive Environmental Law” (1995) 89 Nw. U.L. Rev. 1227.

23. See e.g. Richard N.L. Andrews *et al.*, *Environmental Management Systems: Do They Improve Performance? National Database on Environmental Management Systems, Project Final Report*, vol. 2 (Chapel Hill: University of North Carolina at Chapel Hill, 2003) at 285-88; Aseem Prakash & Matthew Potosky, *The Voluntary Environmentalists* (New York: Cambridge University Press, 2006); and Oren Perez, Yair A. Hamburger & Tammy Shterental, “Environmental Commitment, Organizational Civic Behavior and Institutional Change: The influence of ISO 14001” [unpublished manuscript, 2 July 2007; copy on file with authors].

24. For empirical evidence of the impacts of EMSs on environmental and regulatory performance, see *ibid.*

down to a choice between voluntary industry compliance or the blunt instrument of criminal or quasi-criminal prosecution, with the latter reserved only for the most egregious cases.²⁵ Investigations and prosecutions would often drag out for years before reaching a final conclusion. As a result, many violations were not investigated or prosecuted at all.²⁶

APs were one of several innovative enforcement tools introduced to get away from this often unsatisfactory binary choice. APs do away with the need for formal court proceedings altogether. In theory, this may reduce enforcement costs for governments, regulated firms, and interested third parties alike, and increase the level of enforcement of environmental laws.²⁷ Research indicates that APs have a credible deterrent effect at very modest administrative cost.²⁸ For these reasons many governments embraced APs enthusiastically.

Regulated industries, on the other hand, dislike them. One concern is absolute liability: the government may impose APs without proving the elements of the offence. Another concern is double jeopardy: in some jurisdictions, payment of an AP may not bar prosecution for the same offence. Industry also objects to the relative lack of judicial scrutiny of AP determinations, the high level of administrative discretion over some APs, and the one-size-fits-all approach of others. Some environmental non-governmental organizations (ENGOS) have embraced APs, but others have condemned them as trivializing what should properly be considered crimes.²⁹ These concerns notwithstanding, APs have proliferated in the US and have been introduced in several other countries. They are one of the US Environmental Protection Agency's favourite enforcement tools, increasing dramatically in the last few years.³⁰

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25. David Boyd argues that this binary choice characterizes Canadian environmental law generally. David Boyd, *Unnatural Law: Rethinking Canadian Environmental Law and Policy* (Vancouver: UBC Press, 2003).
 26. Dianne Saxe, "Environmental penalty discount for ISO 14001:2004 users" *ISO Management Systems* (March-April 2007) 38.
 27. Carolyn Abbot, "Environmental Command Regulation" in Richardson & Wood, *supra* note 10, 61 at 94.
 28. R.M. Brown, "Administrative and Criminal Penalties in the Enforcement of Occupational Health and Safety Legislation" (1992) 30 Osgoode Hall L.J. 691.
 29. See Abbot, *supra* note 27 at 93.
 30. The US Environmental Protection Agency (EPA) issued over 4,600 final APs in the fiscal year 2006 with a total value of US\$42 million. This constituted, by far, the highest number

Ontario first enacted legislation authorizing APs in 1998. The legislation was never implemented. After a change of government and some high profile spills from petrochemical facilities, a new provincial statute known as the “Spills Bill” was enacted in 2005.³¹ Among other things, it reintroduced administrative penalties under the name “environmental penalties.” The government’s message to polluters was simple: “You spill, you pay.”³² In theory, EPs “would encourage companies to make greater efforts to prevent spills” and provide “additional incentives to clean them up quickly.”³³ The purpose of EPs was to protect the environment by encouraging companies to take steps, including implementation of an EMS, to prevent environmental violations, remedy their effects, and prevent their recurrence.

The provincial government engaged in a year-long process of public and stakeholder consultations on regulations to implement the EPs scheme, culminating with the posting of the proposed regulations and a detailed guidance document for public comment in October 2006.³⁴ Under the draft regulations, only 148 large industrial facilities in nine sectors that discharge contaminated effluent to a surface water course or private effluent treatment plant would be subject to EPs. At first, EPs would only be available for

of final APs ever issued. US Environmental Protection Agency, *Compliance and Enforcement Annual Results: Numbers at a Glance, Fiscal Year 2006* (15 November 2006), online: <<http://www.epa.gov/compliance/resources/reports/endofyear/eoy2006/fy2006numbers.pdf>>; US Environmental Protection Agency, “National Enforcement Trends – FY 2005,” online: <<http://www.epa.gov/compliance/data/results/nets.html>>.

31. Bill 133, *Environmental Enforcement Statute Law Amendment Act*, 1st Sess., 38th Leg., Ontario, 2005 (assented to 13 June 2005), S.O. 2005, c. 12.
32. Ontario, Ministry of the Environment, News Release, “McGuinty Government Introduces Environmental Penalties Legislation: You Spill You Pay Law Lays Out Tough Penalties and Creates Community Cleanup Fund” (27 October 2004).
33. *Ibid.*
34. Draft Ontario Regulation made under the *Environmental Protection Act – Environmental Penalties* [no date; copy on file with authors] [Draft EPs Regulation]; Draft Ontario Regulation made under the *Ontario Water Resources Act – Environmental Penalties* [no date; copy on file with authors]. See also Ontario Ministry of the Environment, *Guideline for Implementing Environmental Penalties, Draft* (September 2006) [Draft EPs Guideline], online: <http://www.ceaa-acve.ca/Guideline_for_Implementing_Environmental_Penalties.pdf>. The operative provisions of the two draft regulations were essentially the same. For purposes of discussion, this article refers to the draft regulation made under the *Environmental Protection Act*.

violations involving unlawful discharges to water or land. Other violations, such as permitting, operating, sampling, reporting, and record-keeping contraventions, would be phased in later.

The draft regulations specified procedures for initiating, calculating, reviewing, settling, issuing, appealing, and paying EPs. They set the maximum amount of EPs at \$100,000 per violation, per day, and specified factors for determining the amount of an EP. The amount would be determined by a senior Ministry of the Environment official based on the gravity of the violation and any monetary benefit acquired by the violator as a result of the violation.

The “gravity component” of an EP would be reduced by 5 per cent for violators who could demonstrate that they had an EMS in place at the time of the violation that met detailed requirements set out in a Schedule.³⁵ The EMS would have to be audited by an independent, external auditor and the violator would have to submit a statement from the auditor certifying that the EMS satisfied the requirements of the regulations.

Why all the fuss about such an apparently minor regulatory incentive? It was clear to most observers that the 5 per cent reduction was insufficient on its own to induce regulated facilities to implement an EMS in line with the regulations. Furthermore, the EMS penalty reduction was small potatoes in the public debate about the EPs scheme, which focused on double jeopardy and absolute liability. The proposed EMS penalty reduction was controversial principally because of what it said about the government’s view of the role of standards in smart regulation.

D. SMART REGULATION

“Smart regulation” is an umbrella term for efforts to forge a middle path between the extremes of command regulation and deregulation.³⁶ It aims to

35. Draft EPs Regulation, *ibid.*, s. 17 and Sch. 1. Steps taken as part of an EMS (for example, environmental policies and procedures, risk analyses, systems monitoring, operational controls, employee training, and emergency preparedness and response systems) could also be taken into account when determining what actions the violator took to prevent or mitigate the violation, thereby further reducing the gravity component of the EP. The amount of an EP could also be reduced for a good compliance history, preventive measures, prompt remedial action, membership in a provincial environmental leadership program, or investment in an approved “beyond compliance” environmental project.

36. See *e.g.* Richard B. Stewart, “A New Generation of Environmental Regulation?” (2001) 29

make effective and efficient use of public resources. It promotes the use of a sophisticated mix of regulatory instruments, from emission limits to taxes and trading, and from corporate environmental covenants to disclosure obligations and public participation rights. It emphasizes environmental performance goals over the precise techniques used to achieve them. It combines this with an emphasis on procedural tools, such as public participation and environmental impact assessment, which are designed to stimulate dialogue and reflection.³⁷ It seeks to stimulate self-reflection and self-correction by regulated actors in line with public goals, rather than by dictating the details of permissible behaviour. It “attempts to create incentives and procedures that induce entities to act in certain ways and to engage in internal reflection about what form that behaviour should take. ... The state sets goals, but shares more of the responsibility for achieving them with regulated entities.”³⁸ Smart regulation strives for a subtle balance between coercive and non-coercive regulatory techniques. It relies on education, persuasion, rewards, and voluntary self-regulation where possible, and escalates up the regulatory pyramid toward mandated self-regulation, co-regulation, fines, and imprisonment when necessary.³⁹

The smart regulation movement emerged in the 1990s as an effort to seek middle ground between the conventional “command and control” model of environmental regulation that prevailed in the 1970s and the excesses of deregulation experienced in the 1980s.⁴⁰ The “command and control” model of

Capital U.L. Rev. 21; Neil Gunningham, Robert A. Kagan & Dorothy Thornton, *Shades of Green: Business, Regulation, and Environment* (Stanford: Stanford Law and Politics, Stanford University Press, 2003); and sources cited *infra* note 40.

37. See *e.g.* Julia Black, “Proceduralizing Regulation: Part I” (2000) 20 *Oxford J. Legal Stud.* 597; Julia Black, “Proceduralizing Regulation: Part II” (2001) 21 *Oxford J. Legal Stud.* 33; and Julia Black, “Regulatory Conversations” (2002) 29 *J.L. & Soc’y* 163.
38. Daniel J. Fiorino, “Rethinking Environmental Regulation: Perspectives on Law and Governance” (1999) 23 *Harv. Envtl. L. Rev.* 441 at 447-48.
39. Ian Ayres & John Braithwaite, *Responsive Regulation: Transcending the Deregulation-Reregulation Debate* (New York: Oxford University Press, 1992). In recent years Braithwaite has moderated his enthusiasm for reward-based approaches, pointing out the advantages of punishment as a regulatory strategy. See *e.g.* John Braithwaite, “Rewards and Regulation” (2002) 29 *J.L. & Soc’y* 12.
40. See *e.g.* Gunningham, Grabosky & Sinclair, *supra* note 4; Ayres & Braithwaite, *ibid.*; and Cass R. Sunstein, “Paradoxes of the Regulatory State” (1990) 57 *U. Chi. L. Rev.* 407.

environmental regulation is widely credited with having achieved substantial improvements in a variety of first generation environmental problems. By the early 1980s, however, it had come under increasing criticism for being unresponsive to newer environmental problems, such as persistent toxic substances, climate change, and biodiversity loss. It was also criticized as too cumbersome, costly, rigid, adversarial, and slow. Critics warned that it was nearing the limits of its technical capacity⁴¹ or liable to “break down under its own weight.”⁴² Neo-conservative scholars and politicians fixed upon these critiques to launch aggressive programs of environmental deregulation and spending cuts. By the mid-1990s, however, many governments and regulation scholars began to take more nuanced approaches to the problem, seeking to reinvent environmental regulation in ways that built on its early successes and at the same time recognized its limitations.

Smart regulation has been embraced, in various forms, by governments and intergovernmental organizations around the world. In Canada, its most recent manifestation was the previous federal government’s Smart Regulation initiative, launched in 2005. The initiative’s stated goal was to create better, not less, regulation.⁴³ It was continued under a different name, but with substantially the same emphasis, by the current federal government (elected in January 2006).⁴⁴ It involves a restructuring of the process of assessing, reforming, and improving the regime in which regulations are developed, managed, enforced, and measured.

There is always a risk that the smart regulation agenda will be hijacked by the very neo-conservative deregulatory agenda it was meant to displace. Leading Canadian environmental groups have criticized the federal government’s smart regulation initiative for precisely this reason. They argue that it is a deregulatory

41. Gunningham, Grabosky & Sinclair, *ibid.*

42. Orts, *supra* note 22 at 1241.

43. The word “smart” was an acronym for “Specific, Measurable, Attainable, Realistic, and Timely.” Reg Alcock, President of the Treasury Board of Canada, “Government of Canada’s Implementation Plan for Smart Regulation,” (Speech delivered to the National Press Club at the Launch of the Government of Canada’s Implementation Plan for Smart Regulation, Ottawa, 24 March 2005), online: <http://www.tbs-sct.gc.ca/media/ps-dp/2005/0324_e.asp?printable=True>.

44. The current Conservative government calls it “performance-based regulation.” See Government of Canada, “Regulation,” online: <<http://www.regulation.gc.ca>>.

agenda in disguise, prioritizing business over public health, safety, and the environment, neglecting the need to apply and enforce existing environmental regulations, and ignoring evidence that command regulation can be more effective than voluntary or non-regulatory approaches. They also believe it ignores evidence that international harmonization tends to exert downward pressure on environmental, health, and safety standards and to hamper the transparency, accountability, timeliness, and effectiveness of regulation.⁴⁵

These objections are a useful reminder that smart regulation is not just about greater flexibility, competitiveness, and lower regulatory costs for regulated businesses. It must balance these attributes with the imperatives to protect public health, safety, welfare, and environmental integrity, and to promote environmentally and socially sustainable economic development. Strong and effective laws and regulations can and should maintain a prominent place in a sophisticated mix of policy instruments.

Smart regulation also needs to address one of the principal limitations of traditional environmental regulation. Environmental regulation was and remains aimed overwhelmingly at large, stationary, point-source polluters—that is, big industrial facilities. By contrast, many of the most pressing contemporary environmental challenges—including habitat destruction, biodiversity loss, climate change, and persistent toxic pollution—are of a different, potentially more intractable character, because they are the cumulative results of the everyday choices and actions of countless people and organizations that control innumerable geographically dispersed, often mobile, non-point sources of pollution. To address these problems, we must mobilize and influence a much broader range of actors, including individuals, households, and—crucially, as we will argue toward the end of the article—small business.

45. Letter from the Canadian Environmental Law Association (CELA) to Prime Minister Paul Martin Regarding Report of the External Advisory Committee on Smart Regulation (22 October 2004), online: <<http://www.cela.ca/publications/cardfile.shtml?x=2051>>; Letter from CELA *et al.* to Chair and Members of the External Advisory Committee on Smart Regulation Regarding the Need to Give Regulatory Priority to Health, Safety and Environmental Protection (16 August 2004), online: <<http://www.cela.ca/publications/cardfile.shtml?x=2016>>; and Chris Rolfe & Karen Campbell, West Coast Environmental Law Association, *West Coast Environmental Law's Comments on 'Smart Regulation for Canada'* (Submitted to the External Advisory Committee on Smart Regulation, August 2004), online: Library and Archives Canada <http://epe.lac-bac.gc.ca/100/206/301/pco-bcp/committees/smart_regulation-ef/2006-10-11/www.pco-bcp.gc.ca/smartreg-regint/en/06/01/su-22.pdf>.

Finally, a dimension of smart regulation that has risen to prominence in recent years is an emphasis on the role of non-state actors and institutions.⁴⁶ Some researchers have examined the potential role of EMSs and other non-governmental initiatives in smart regulation.⁴⁷ The federal government's smart regulation directive recognizes this issue, instructing government decision makers to "make use of all or parts of relevant national or international standards, guidelines, and recommendations as a basis for technical regulations and for conformity assessment procedures when they fulfill intended policy objectives."⁴⁸ This brings us to the central question of this article: what role can standards play in smart regulation? We answer this question in the form of six principles for regulators, arising out of the experience with Ontario's EPs regulations.

III. HOW TO INTEGRATE STANDARDS INTO SMART REGULATION: SIX PRINCIPLES

PRINCIPLE 1: DO NOT REINVENT THE WHEEL

The first lesson to be drawn from the Ontario EPs regulations is not to reinvent the wheel. If a recognized standards development body has gone to the trouble of developing a widely accepted, consensus-based standard that fulfills the objectives of a proposed regulation, incorporate the existing standard into the regulatory scheme as far as possible and appropriate, instead of drafting a new specification from scratch.

46. See e.g. Colin Scott, "Regulation in the Age of Governance: The Rise of the Post-Regulatory State" in Jacint Jordana & David Levi-Faur, eds., *The Politics of Regulation: Institutions and Regulatory Reforms for the Age of Governance* (Cheltenham, UK: Edward Elgar, 2004) 145.

47. See e.g. Robert B. Gibson, ed., *Voluntary Initiatives and The New Politics of Corporate Greening* (Peterborough, ON: Broadview Press, 1999); Gunningham, Grabosky & Sinclair, *supra* note 4; Neil Gunningham & Darren Sinclair, *Leaders & Laggards: Next-Generation Environmental Regulation* (Sheffield: Greenleaf, 2002); and Kernaghan Webb, ed., *Voluntary Codes: Private Governance, the Public Interest and Innovation* (Ottawa: Carleton Research Unit for Innovation, Science and Environment, Carleton University, 2004), online: <<http://www.carleton.ca/spa/VolCode/Volcode.htm>> [*Voluntary Codes*].

48. Government of Canada, *Cabinet Directive on Streamlining Regulation* (Ottawa: Government of Canada, 2007) at 6, online: <<http://www.regulation.gc.ca/directive/directive-eng.pdf>>. This directive replaced the previous Liberal government's Cabinet directive on smart regulation, which contained an identical provision.

When the government of Ontario decided to develop regulations offering an EP reduction to violators with an EMS in place, it had a choice. It could adopt ISO 14001 or another existing standard as a benchmark against which management systems would be judged. Alternatively, it could develop its own EMS requirements from scratch. ISO 14001 is the product of many thousands of hours of deliberation by hundreds of experts over more than a decade. These experts hail from industry, environmental consulting firms, standards development organizations, government, consumer groups, and—to a lesser extent—environmental groups and research institutions, representing dozens of countries and international organizations. These experts, mostly volunteers, developed ISO 14001 over an initial four-year period and saw it through a further five-year revision process that culminated with the publication of the second edition in 2004. This work followed the consensus-based standards development model of ISO and its member bodies. In theory, standards are established by consensus of all major interests, from big and small business to governments, consumers, public interest groups, and scientists. While this ideal is never realized perfectly in practice, ISO 14001 represents the closest approximation we have to a global consensus on what an environmental management system should look like.

Instead of reaping the fruits of this collective experience and expertise, the government of Ontario expended substantial time and energy drafting its own detailed description of the requirements an EMS must meet to qualify for the reduction. The government may have had cogent reasons for promulgating its own purpose-built EMS standard. For one thing, it may have wished, quite reasonably, to accommodate the diversity of approaches to EMSs. For another, it may have felt that an ISO 14001-based EMS, on its own, would not respond adequately to public policy objectives such as improved spill prevention, corrective action, legal compliance, and corporate transparency.

Given these considerations, why should regulatory authorities incorporate existing non-governmental standards into statutes or regulations? The Standards Council of Canada (SCC) identifies five reasons:

- (a) the standards have been developed by balanced committees of all relevant interests, employing the principles of consensus;
- (b) the standards have undergone a public review process as well as a “second level review” by the [standards development organization] prior to publication;
- (c) the standards are maintained and reviewed at appropriate intervals to ensure

- (d) current technological developments are incorporated;
- (d) the commercial needs of producers, users, and other interests are addressed at the development stage, thus ensuing regulations referencing these standards are more amenable to commercial acceptance; and,
- (e) the standards address the national public interest by considering to the extent possible as appropriate to the subject of the standard, how it advances the national economy, supports sustainable development, benefits the health, safety and welfare of workers and the public, assists and protects consumers and facilitates trade.⁴⁹

As we noted earlier, standards have two key characteristics that distinguish them from legislation. First, they are approved by a *recognized body*. Second, they are *established by consensus*.

“Recognized body” usually means an organization recognized by the relevant national or international body responsible for accrediting standards development organizations. Although there may occasionally be a question of whether a particular body is or should be a “recognized body,” the central players are uncontroversial. ISO is one of them, along with its national member bodies, and it occupies a peculiar niche, perched between the public and private sectors. It acts as a bridging organization, striving for consensus on standards that meet the needs of both society and business. ISO membership is open to the one body in each country that is the most representative of standardization in its country. Many ISO member bodies, especially in developing and transitional countries, are government agencies or quasi-public bodies with their mandates set out by legislation. ISO member bodies in some industrialized countries have their roots in the private sector, representing national partnerships of industry associations.⁵⁰

Canada’s ISO member body is the Standards Council of Canada, a federal crown corporation created by statute in 1970. Its mandate is to foster and promote voluntary standardization in Canada. Although it reports to Parliament and is financed partially by parliamentary appropriation, it is

49. Standards Council of Canada (SCC), *Key Considerations in the Development and Use of Standards in Legislative Instruments: Understanding the Partnership of the Regulatory and Voluntary Standards Systems* (Ottawa: Standards Council of Canada, 2006) at 3 (s. 3.3, General Principles), online: <<http://www.scc.ca/en/publications/brochures/index.shtml>> [SCC, “Key Considerations”].

50. International Organization for Standardization, “About ISO,” online: <<http://www.iso.org/iso/about.htm>>.

independent of government in its policies and operations. The SCC oversees Canada's National Standards System and coordinates Canadian input to foreign and international standardization forums, including ISO. The National Standards System is a network of more than 400 organizations and more than fifteen thousand individuals involved in standards development, promotion, and implementation in Canada.⁵¹ The SCC does not develop standards itself. It has accredited four standards development organizations to develop National Standards of Canada. The Canadian Standards Association (CSA) is one of these.⁵² We will focus on the CSA, since it is responsible for developing Canadian EMS standards. The CSA is an independent, not-for-profit, membership-based association that serves business, industry, government, and consumers.⁵³

A standard developed by the CSA or ISO may be submitted to the SCC for approval as a National Standard of Canada if it meets the following criteria:

- it was developed by a committee that had balanced representation of all stakeholders including consumer and public interests and followed a consensus process,
- the standard was subjected to public review,
- it has been published in both official languages,
- it is consistent with existing international standards, and
- it does not constitute an illegitimate barrier to trade.⁵⁴

This brings us to the principle of consensus. It is the key to the standards community's claim to credibility. The SCC adopts ISO's definition of consensus as "general agreement, characterized by the absence of sustained opposition to substantial issues by any important part of the concerned interests and by a process seeking to take into account the views of all parties concerned and to reconcile any conflicting arguments."⁵⁵ Consensus implies the

51. For a description of the Canadian National Standards System see Standards Council of Canada, "National Standards System," online: <<http://www.scc.ca/en/nss/>>.

52. The others are the Bureau de Normalisation du Québec (BNQ), the Canadian General Standards Board (CGSB), and the Underwriters Laboratories of Canada (ULC).

53. See Canadian Standards Association (CSA), online: <<http://www.csa.ca>>.

54. See *e.g.* Standards Council of Canada, *CAN-P-2F, Requirements and Procedures for the Request for, Development, Approval, Preparation, and Maintenance of National Standards of Canada* (Ottawa: SCC, 2006), online: <<http://www.scc.ca/en/publications/criteria/all.shtml>> [*CAN-P-2F*].

55. *CAN-P-1E*, *supra* note 9, s. 2.1, quoting ISO/IEC Guide 2, *supra* note 5, s. 1.7.

satisfaction of two conditions. The first is that representatives of all interest categories participate effectively in standards development. The second is that there is no sustained opposition from any significant segment of interested parties at any critical stage in the development of a standard.

The principle of consensus is manifested in the structure of standardization committees and their decision-making processes. The SCC and CSA require that committee membership reflect a “balanced matrix” of interested and affected parties, so that no single interest category can dominate the process.⁵⁶ The SCC and CSA recognize four interest categories:

- Producers (those predominantly involved in production of products, materials or services, which usually means business firms);
- Users (those who predominantly represent end users of the subject products, materials or services, including consumers);
- Regulators (government bodies involved in regulating the subject products, materials or services); and
- General interest (those with a demonstrated interest who do not fall into the other categories, such as academics, scientists, and public interest NGOs).⁵⁷

Other interest categories may be identified when relevant to the work of particular committees. In environmental management standards committees, for example, “service/professional” is recognized as a separate interest category to reflect the important role of environmental management professionals.

Each CSA standards development committee’s membership matrix must be approved by a strategic steering committee responsible for overseeing its work.⁵⁸ The matrix defines interest categories appropriate to the committee’s scope and stipulates the minimum and maximum numbers of voting members for each interest category. The actual number of voting members in any one category may not exceed the sum of the actual number of voting members in the two smallest interest categories. If the committee is out of balance, no vote may be taken until balance is restored.

The principles of balanced representation and consensus decision making are, not surprisingly, realized imperfectly in practice. The SCC recognizes the

56. *CAN-P-2F*, *supra* note 54, s. 3.1.5.

57. *Ibid.*; see also Canadian Standards Association, *CSA Directives and Guidelines Governing Standardization, Part 1: Participants and Organizational Structure* (Etobicoke: CSA, 1999), s. 3.3.3 [*CSA Directives*].

58. *CSA Directives*, *ibid.*, s. 3.3.

“particular challenges in finding the resources to permit participation by small and medium enterprises (SMEs), academics, and consumers.”⁵⁹ The CSA and ISO have been criticized for inadequate participation by labour, consumers, ENGOs, and SMEs.⁶⁰ There are various obstacles to effective participation by these interest categories, including competing priorities, lack of awareness, and limited resources, time, and technical capacity. Most ENGOs shun multi-stakeholder processes in general, whether governmental or non-governmental, because the emphasis on consensus dilutes ENGO voices and constrains their ability to employ confrontational or populist tactics. This makes it difficult to maintain a balanced matrix in some cases. Nonetheless, the CSA and SCC do more than most ISO member bodies to ensure equal and effective participation by all interested and affected parties, and often fare no worse than typical government policy-making processes in this regard. As a result, the Canadian “balanced matrix” approach to standards development is frequently cited as an example for other ISO member bodies to follow.

Let us now consider the development of EMS standards. ISO 14001 is a management system standard. It is designed to help any organization improve how it manages the environmental impacts of its activities, products, or services. The organization may be a for-profit private sector enterprise, a not-for-profit organization, or a public sector entity. ISO 14001 outlines the requirements of a well-functioning EMS, but it does not dictate *how* these requirements are to be fulfilled. The *how* is the responsibility of the adopting organization. This allows ISO 14001 to accommodate the diversity of organizations, cultures, and economic regions.

Considering this diversity, it is amazing that agreement on an international EMS standard was achieved at all. There has to be substantial agreement, without sustained opposition from any significant portion of the interested parties at the table, for a standard to be voted and accepted as an ISO document. Consensus has to be achieved not just at the international level but also in each ISO member body, where national negotiating positions are

59. *CAN-P-IE*, *supra* note 9, s. 1.1.

60. See *e.g.* Canadian Institute for Environmental Law and Policy, *CSA Environmental Standards Writing: Barriers to Environmental Non-Governmental Organizations Involvement* (Toronto: CIELAP, 1997); Pollution Probe, *Environmental Non-Governmental Organization (ENGO) Participation in National Standards Setting* (Toronto: Pollution Probe, 2002); and Krut & Gleckman, *supra* note 14.

worked out and decisions ultimately made whether to adopt an ISO standard nationally.

ISO 14001 was developed within an ISO committee known as ISO Technical Committee 207, by a subcommittee known as ISO TC 207/SC 1. Canadian experts played important roles in the negotiation of the original standard and its recent revision. Throughout this process, Canada's position in the international negotiations was developed by a national "mirror committee," the SCC's Canadian Advisory Committee on SC 1 (CAC/SC 1). This mirror committee also serves as the CSA technical committee responsible for developing national EMS standards (the Technical Committee on EMSs, or TC/EMS).⁶¹ As such, the committee members wear two hats. When deliberating Canadian positions in the international standards development process, they act as CAC/SC 1. When considering whether to adopt a final ISO standard as a National Standard of Canada or other issues affecting domestic EMS standardization, they act as TC/EMS. Either way, the committee is bound by the balanced matrix and consensus requirements described above. This multi-stakeholder Canadian EMS standards committee deliberated at great length the merits of ISO 14001 for use in Canada.

The existence of ISO 14001 is a testament to global recognition of the challenge of sound environmental management. It also reflects recognition of the benefits of a common framework for comparison of EMSs across different organizational, social, and economic contexts. ISO 14001's flexibility is critical, as there are over 150 million legally constituted enterprises in the world. Over 95 per cent of these are SMEs.⁶² When properly integrated, the management system for each one would reflect something of its unique business culture, even though there would be similarities within a sector or business type.

When drafting its EPs regulations, the Ontario government could have incorporated ISO 14001 as a baseline for the EMS component of the regulations. It did not: ISO 14001 was not even mentioned in the draft

61. CSA environmental committee names and structures were changed in late 2007, but the basic model of a combined national and international "mirror" committee on EMS standards was maintained.

62. International Finance Corporation, *Micro, Small and Medium Enterprises: A Collection of Published Data* (Washington: IFC, 2006).

regulations. Instead, the government drafted its own homegrown, six-page⁶³ EMS standard more or less from scratch. This included a fifty-page guidance document and a table listing some differences between the regulatory EMS and ISO 14001. The draft regulations ignored more than a decade of complex international negotiations, delicate compromises, and multi-stakeholder national deliberations over ISO 14001.

The idea of regulatory incentives for implementation of robust EMSs is good. One of the central goals of smart regulation is to enlist the self-critical, reflexive capacities of regulated actors. As we noted previously, EMSs are a good example of reflexive instruments. Regulations encouraging EMS adoption preserve a high degree of autonomy for regulated entities. We live in liberal-democratic capitalist societies, in which individual autonomy and private enterprise are fundamental values. Business owners value autonomy so that they can respond quickly, efficiently, and profitably to market needs. Encouragement of autonomy also makes sense from a regulator's perspective, within limits. It is more effective and efficient to induce regulated entities to exercise their autonomy in a direction that achieves democratically determined public policy goals, than to intervene in the minutiae of regulated firms' operations.⁶⁴ Governments that promote policies encouraging EMS adoption can expect to benefit from more independent action that may conceivably place many organizations ahead of regulatory requirements, provided the EMSs are sufficiently robust. Regulations that encourage the adoption of credible and robust EMSs can, therefore, exploit the autonomous, reflexive capacities of regulated organizations in the service of collective goals.

Unfortunately, by attempting, in effect, to write a whole new EMS standard in its EPs regulations, the Ontario government passed up an opportunity to save public policy development costs by taking advantage of the substantial expertise, time, and money that went into the development of the existing ISO 14001 standard. This would have been an effective way to move a portion of the cost

63. For comparison, this is approximately the same length as the requirements clause of ISO 14001. See ISO 14001:2004, *supra* note 2, clause 4.

64. See *e.g.* Nikolas Rose & Peter Miller, "Political Power Beyond the State: Problematics of Government" (1992) 43 *Brit. J. Sociology* 173 at 184; Peter N. Grabosky, "Using Non-Governmental Resources to Foster Regulatory Compliance" (1995) 8 *Governance* 527; Gunningham, Grabosky & Sinclair, *supra* note 4 at 10, 123-25; and Nikolas Rose, *Powers of Freedom: Reframing Political Thought* (Cambridge: Cambridge University Press, 1999) at 50.

of policy development off the public budget and enlist non-governmental resources in the development of public policy instruments.⁶⁵ Incorporating an existing National Standard of Canada into the EPs regulations instead of rewriting it from scratch would also have had other advantages, including:

- Presenting a regulatory solution that was likely to meet the expectations of a majority of the stakeholders addressed by the regulation, since the standard was developed by a consensus of various interests;
- Embodying the knowledge and experience of a wider range of experts than the government might normally have at its disposal;
- Enhancing uniformity of requirements faced by regulated entities, thereby reducing regulated entities' costs and eliminating barriers to movement of goods and services;
- Enhancing the likelihood of voluntary, market-driven compliance with regulations, thereby reducing the burden of regulatory oversight; and
- Enhancing social efficiency, insofar as regulated entities use the same tool to meet both market and regulatory needs.⁶⁶

Instead, the homegrown EMS opened up the door to uncertainty and unanticipated costs.

Standards are usually incorporated into regulation by reference—that is, the standard is referred to rather than reproduced in the regulation.⁶⁷ Occasionally, governments reproduce standards or parts of standards verbatim in regulations. This is true of the EMAS regulation, which reproduces Clause 4 of ISO 14001 word for word as the EMS component of the scheme. Standards are typically revised from time to time, necessitating amendment of the corresponding regulation and posing the risk of inconsistency if there is a lag between publication of the revised standard and amendment of the regulation.⁶⁸

65. See Grabosky, *ibid.*

66. SCC, “Key Considerations,” *supra* note 49 at 6 (s. 5.1.1).

67. For the various ways voluntary standards can be incorporated into official legal systems, see Stepan Wood, “Environmental Management Systems and Public Authority in Canada: Rethinking Environmental Governance,” (2002-2003) 10 *Buff. Envtl. L.J.* 129 [Wood, “Environmental Management Systems”]; Stepan Wood, “Green Revolution or Greenwash? Voluntary Environmental Standards, Public Law, and Private Authority in Canada” in Law Commission of Canada, ed., *New Perspectives on the Public-Private Divide* (Vancouver: University of British Columbia Press, 2003) at 123 [Wood, “Green Revolution”]; and Errol Meidinger, “Environmental Certification Programs and U.S. Environmental Law: Closer Than You May Think” (2001) 31 *Envtl. L. Rep.* 10162.

68. Indeed, the EMAS regulation had to be amended after ISO 14001:2004 was published in

Incorporation by reference, by contrast, allows regulators to accommodate subsequent changes to a standard without the necessity of further regulation. In this way regulation can respond easily and quickly to technical changes. The trade-off is reduced control over the content of regulation, which may be undesirable from the regulator's perspective.⁶⁹ In some cases it may even constitute an impermissible delegation of authority.⁷⁰

Nothing we have said is meant to suggest that standards eliminate the need for regulation or that non-governmental standards-setting bodies are a substitute for democratically elected governments. All we claim is that there are compelling reasons for regulators, at every jurisdictional level, to look carefully at how incorporation of voluntary standards into regulation might contribute to the achievement of public policy goals. In particular, they should consider referring to existing, consensus-based, non-governmental standards, rather than "reinventing the wheel" and drafting their own standards from scratch.

Not only did the Ontario government choose not to incorporate ISO 14001 by reference into its regulatory scheme, the EMS standard it devised for the draft regulations deviated substantially from ISO 14001. This brings us to our second lesson.

PRINCIPLE 2: STRIVE FOR CONSISTENCY

The second principle we offer from the Ontario experience is that, where a widely accepted standard already exists on the subject, creation of unexplained inconsistencies between the proposed regulation and the standard should be avoided. At first glance, the EMS described in the draft regulations was broadly consistent with ISO 14001. Even on a cursory examination, however, there

order to incorporate the revised standard into the regulation.

69. The Standards Council of Canada identifies three preferred methods of reference: dated identification of a specific issue of a standard, dated identification of a specific issue of a standard as amended from time to time, and undated identification. SCC, "Key Considerations," *supra* note 49 at 7 (s. 5.2, Methods of Referencing Standards). The latter two accommodate subsequent changes to the standard, but reduce the regulator's control and may raise issues of impermissible delegation in some cases.
70. See *e.g.* *State v. Crawford*, 177 P. 360 (Kan. 1919) at 361, quoted in Harm Schepel, *The Constitution of Private Governance: Product Standards in the Regulation of Integrating Markets* (Oxford: Hart, 2005) at 1 (holding a Kansas statute requiring electrical wiring to be in accordance with the National Fire Protection Association's National Electrical Code to be so obviously invalid "that elaborate illustration or discussion of its infirmities are unnecessary").

were numerous significant discrepancies in terminology, concepts, scope, and other features. For the most part, these discrepancies were unacknowledged and unexplained, creating ambiguity as to how, if at all, the requirements of ISO 14001 differed from those of the regulations. The guidance document accompanying the regulation⁷¹ attempted to explain some differences and similarities between the regulatory EMS and ISO 14001. However, it compounded the problem by failing to identify many discrepancies and giving the impression that the regulations and ISO 14001 were aligned more closely than their actual text would suggest. This problem, had it persisted in the final regulations, would have rendered largely counterproductive the province's otherwise welcome effort to incorporate EMSs into its regulatory system.

In the end, the final EPs regulations simply eliminated the homegrown regulatory EMS, rendering our criticism moot in certain respects. The episode stands, however, as a cautionary tale for other regulators and underlines the importance of being alert to unproductive discrepancies between regulations and existing, widely used standards. This is especially important, since it appears that the government intended the regulatory EMS to be consistent with ISO 14001. The problem is that language is critical in international standards, as it is in regulation. Even very small, seemingly inconsequential differences in text can give rise to inconsistency, ambiguity, and uncertainty for implementing businesses, conformity assessors, and interested parties. Almost every word of ISO 14001 was the subject of intense domestic and international negotiation. Key terms such as "prevention of pollution," "continual improvement," "control and influence," "significance," and "activities, products and services" were the subjects of prolonged debate in the initial development and subsequent revision of ISO 14001. The resulting text reflects hard-won and often delicate compromise. What appear to be minor departures from accepted terminology may thus be perceived as major inconsistencies by EMS practitioners.

Moreover, as a standard such as ISO 14001 spreads throughout the market and users, consultants, and conformity-assessment professionals gain experience with it, a whole set of understandings and expectations builds up as to its meaning. Even minor departures from the established terminology can inject substantial uncertainty into the market. Fear of such disruption was one of the reasons that the recent revision of ISO 14001 was restricted to clarification of

71. See Draft EPs Guideline, *supra* note 34.

the intent of the original standard and enhanced compatibility with ISO 9001. “No new requirements” was the watchword of the revision, reflecting the importance attached by the international EMS standards community to ensuring continuity and predictability, while not disturbing the delicate compromises embodied in the language of the standard.⁷²

There were three kinds of discrepancies between Ontario’s homegrown EMS and ISO 14001: inconsistent scope and terminology, extra requirements, and weakened requirements. As for scope and terminology, the homegrown EMS applied to a “plant,” whereas an ISO 14001 EMS applies to an “organization.” The two terms were defined differently, causing confusion whether a firm with an ISO 14001 EMS would have to expand or restrict the scope of its EMS to qualify for the EP reduction. The Schedule also required plants to identify every “process, practice, material, product or energy use” that may affect the natural environment.⁷³ The government asserted that this was equivalent to ISO 14001’s requirement to identify the “environmental aspects” of the organization’s “activities, products and services.”⁷⁴ But identification of environmental aspects and impacts was among the most difficult and controversial issues in the revision of the standard.⁷⁵ So much energy was expended in reaching an international consensus on the appropriate language that any departure from it would have occasioned considerable anxiety among thousands of organizations, consultants, and auditors that use ISO 14001. Finally, the regulations would have required a plant’s EMS to be audited against the requirements of the regulation rather than against ISO 14001. This blurred the line between EMSs and compliance audits. The government also failed to

72. The “no new requirements” rule was not observed to the letter. For a Canadian perspective, see CSA Technical Committee on EMS, *Guidance for Canadian Users on Changes Between ISO 14001:1996 and ISO 14001:2004* (Mississauga: CSA, 2004) [copy on file with authors].

73. Draft EPs Regulation, *supra* note 34, Sch. 1.

74. Draft EPs Guideline, *supra* note 34 at 48; ISO 14001:2004, *supra* note 2.

75. This issue was so contentious during the recent revision process that its elaboration was confined to ISO 14001’s companion guidance standard, ISO 14004. See Canadian Standards Association, *National Standard of Canada CAN/CSA-ISO 14004:04 (ISO 14004:2004), Environmental management systems – General guidelines on principles, systems and support techniques*, 2d ed. (Mississauga: CSA, 2004). Developing agreed guidance on “aspects, impacts and significance” consumed almost three years, hundreds of pages of comments, and untold volunteer hours. Johansson, who chaired the ISO task group on this issue, tallied more than two hundred hours managing the international negotiation process.

consider several key issues: who would accredit auditors to conduct these audits, what training auditors would need, whether their insurers would cover such services, and at what additional cost. It was unclear, in short, whether the private market would be willing or able to supply the required certifications.

The second way in which the homegrown EMS departed from ISO 14001 was by introducing extra requirements beyond those found in ISO 14001. The government explicitly acknowledged two of these additional requirements. First, the draft regulations required a policy commitment to “pollution prevention” (P2), *i.e.*, the use of “processes, practices, materials, products and energy that avoid or minimize the creation of pollutants and wastes at the source.”⁷⁶ This is stronger than ISO 14001’s requirement of a commitment to “prevention of pollution” (POP). POP is defined as including recycling and end-of-pipe pollution control. This was another hotly debated issue in the development of ISO 14001. Next, the draft regulations required an *external* audit of the EMS and *certification* by the external auditor that the EMS meets all the requirements of the regulations. While ISO 14001 requires periodic internal EMS audits, it does not require external audits or certification. It is up to the adopting organization to choose how to demonstrate its conformity to the standard. ISO 14001 recognizes four options: self-declaration, second-party assessment (by a customer or other interested party), confirmation of self-declaration by an external party, and third party certification. In addition, there were several extra requirements that the government did not acknowledge, including much greater documentation requirements,⁷⁷ a requirement to rank-order all environmental aspects based on the significance of their potential adverse effects,⁷⁸ and a requirement that all environmental targets be quantifiable.⁷⁹

76. Draft EPs Regulation, *supra* note 34, s. 19(1) and Sch. 1.

77. This was in stark contrast to the second edition of ISO 14001, which reflected a hard won international consensus that documentation requirements had to be reduced to make EMSs more accessible to small organizations.

78. The determination of significance relies heavily on informed judgment and is affected by a host of variables. See *e.g.* Canadian Standards Association International, *Plus 1145: A Guide to Identifying Significant Environmental Aspects* (Toronto: CSA International, 1999). Requiring an explicit ranking of significant aspects would add little value.

79. ISO 14001 recognizes that quantification is not always practicable. ISO 14001:2004, *supra* note 2, clause 4.3.3.

Finally—and remarkably—the requirements of the homegrown EMS also appeared to be weaker than those of ISO 14001 in several respects. First, the regulations would only have required plants to identify environmental aspects with *adverse* effects, whereas ISO 14001 requires organizations to identify and manage aspects that have significant adverse *or beneficial* impacts. Second, the regulations only included environmental aspects over which the plant has “control,” while ISO 14001 applies to aspects the organization controls and those over which the organization determines it has an influence. In other words, ISO 14001 has the potential to reach farther up or down the value chain than the homegrown EMS would. The question of “control and influence” is another perennially controversial issue in ISO 14001. The delicacy of the compromise reflected in the language of ISO 14001 on this issue cannot be overemphasized. Last, the draft regulations’ requirements for training, awareness, and competence reflected an outdated approach, focused on task-specific formal training. This was rejected explicitly and replaced with a more holistic approach in the recent revision of ISO 14001. This new approach emphasizes competence more broadly. It also emphasizes the importance of educating personnel as to why conformity with the EMS matters and what might happen when established procedures are not followed. The EPs guidance document neither acknowledged these apparent downward departures from ISO 14001, nor offered any explanation for them.

To recapitulate, we do not believe that the government intended to create significant discrepancies in language, concepts, terminology, and requirements between the regulatory EMS and the leading internationally recognized EMS standard. But that is what it did. Moreover, it failed to explain or acknowledge most of these discrepancies. This would have led to confusion, anxiety, and resistance among regulated industries and environmental management professionals. After hearing from EMS experts and industry, the government withdrew its homegrown EMS specification from the final EPs regulations. We are not suggesting, however, that governments should simply adopt non-governmental standards. Far from it: there are many circumstances when public policy legitimately demands more than what such standards have to offer. This brings us to our third principle.

PRINCIPLE 3: MAKE ANY EXTRA REQUIREMENTS CLEAR

If an existing, widely accepted standard does not, on its own, meet all the public policy goals of the proposed regulation, public authorities should identify as clearly as possible how the standard is deficient and what more is required to meet public policy objectives. As noted in the previous section, to qualify for an EP reduction, a regulated firm's EMS would have had to meet extra requirements beyond ISO 14001. This is not a problem in itself. It is a government's prerogative, as guardian of the public interest, to ask firms to do more than just demonstrate conformity to a voluntary standard in return for regulatory benefits. A government may, for instance, want firms to put greater emphasis on pollution prevention, environmental performance improvement, public transparency, or community consultation than ISO 14001 requires. What is important, however, is that the regulator should specify any extra or different requirements clearly, so that firms, auditors, regulators, and other interested parties can readily identify what is expected.⁸⁰ Ideally, they should provide a rationale for the extra or different requirements, so that firms, auditors, and others can assess the value of going the extra mile. For the most part, the Ontario government failed to do either of these things.

Two of the draft regulations' additional requirements were acknowledged explicitly in the accompanying guidance document. The first was the requirement of a policy commitment to pollution prevention. The second was the requirement of an external third party audit certifying conformity with the regulatory EMS specification. As noted earlier, the other additional requirements were implicit, unacknowledged, and uncertain in scope and effect. The only extra requirement for which the government offered a rationale was the commitment to pollution prevention (P2) as opposed to ISO 14001's "prevention of pollution," (POP) which, as noted, includes end-of-pipe pollution control. The rationale was familiar to anyone knowledgeable about the concept of pollution prevention:

80. Europe's voluntary EMAS regulation is a good example. It incorporates ISO 14001 as its EMS specification, and specifies separately the extra requirements for participating facilities. See EMAS, *supra* note 20. For a summary of the main differences between EMAS and ISO 14001 see European Commission, "Frequently Asked Questions – What is the difference between ISO 14001 and EMAS?", online: <http://ec.europa.eu/environment/emas/tools/faq_en.htm#difference>.

[P]ollution prevention is a process that regularly and systematically examines root causes of all wastes generated and seeks to eliminate the causes of pollution rather than treating the symptoms. Pollution prevention is the preferred approach at the top of the environmental management hierarchy, followed by re-use, recycling, control, treatment, disposal, with remediation and clean-up being the least preferred option.⁸¹

The government of Ontario was not alone in insisting on a commitment to pollution prevention in return for granting regulatory benefits to firms with EMSs. Public authorities in several jurisdictions have specified this as an expectation for the use of EMSs to achieve public policy goals.⁸²

The government offered no rationale, however, for the requirement of an external audit and certification. ISO 14001 does not require an external audit or independent third party certification of conformity. It does not specify the frequency of internal audits, nor does it state that all elements of the EMS must be reviewed in every audit. It recognizes four conformity assessment options, designed to suit the varying needs of the market:

1. Making a self-determination and self-declaration;
2. Seeking confirmation of its conformance by parties having an interest in the organization, such as customers;
3. Seeking confirmation of its self-declaration by a party external to the organization; or
4. Seeking certification/registration of its environmental management system by an external organization.⁸³

Option 1 is a first party self-assessment process. Option 2 is an assessment by someone having an interest in the organization, commonly referred to as a second party or supplier audit. Options 3 and 4 are performed by independent external parties. Option 3 was added in the 2004 revision, largely to accommodate the EnviroReady Report process, in which a professional accountant with specific training confirms the presence of the ISO 14001 elements.⁸⁴ This is cheaper and more streamlined than third party certification.

81. Draft EPs Guideline, *supra* note 34 at 52-53.

82. See *e.g.* Enforcement Cooperation Program of the Commission for Environmental Cooperation (CEC), *Improving Environmental Enforcement and Compliance: 10 Elements of Effective Management Systems* (Montreal: Commission for Environmental Cooperation, 2000) at 3, online: <http://www.ccc.org/files/PDF/LAWPOLICY/guide-e_EN.pdf>.

83. ISO 14001:2004, *supra* note 2, Introduction.

84. "EnviroReady Report" is owned by E2 Management Corporation. For information on the

It was created specifically to address the needs of SMEs by making external confirmation of ISO 14001 implementation economically viable for them. Option 4 is formal third party certification or registration by an accredited ISO 14001 certifier. This is typically the costliest of the four options.⁸⁵ Most SMEs have shunned it for reasons of cost and culture.

Option 4 was the only option recognized by the draft regulations. No rationale was offered for this restrictive and costly approach, which would effectively have disqualified the vast majority of Ontario firms from eligibility for the EMS-based EP reduction.⁸⁶ We can, however, guess. Many ENGOs, governments, and scholars believe that third party certification is the only effective guarantee of the credibility of a firm's claims about implementation of voluntary environmental initiatives. This insistence may be well-founded in specific cases, but not in others. First, it is based on the mistaken assumption of a binary choice between self-declaration and third party certification, and overlooks the existence of the intermediate options mentioned earlier. Second, many firms find that the cost of third party certification outweighs the resulting benefits. Third, the evidence does not show that ISO 14001 certification generates better environmental results than ISO 14001 implementation by itself. A recent US study concluded that there was no support "for the proposition that an externally audited, ISO-certified EMS is associated with greater improvements in environmental performance than uncertified facilities."⁸⁷ Finally, accounting scandals such as Enron and Worldcom remind us that third party auditors themselves may not always be as objective and independent as we would like. At the best of times, auditors face a dilemma, as Andrews *et al.* point out:

Like financial auditors, EMS auditors face conflicting pressures between the ideals of environmental professionals and their necessary financial interest in obtaining and

process, see EnviroReady, online: <<http://www.14000registry.com>>. Johannson is the coordinating lead person responsible for the development of the EnviroReady Report process and has a commercial interest in it. Addition of the third conformity assessment option was proposed by Mexico and accepted by the international committee without objection in 2002.

85. See Table 2 and accompanying discussion, below.

86. Granted, the EPs scheme is currently restricted to large industrial facilities, for many of which formal EMS certification is not a huge financial obstacle; the government, however, plans to expand the scheme to other facilities and sectors over time.

87. Andrews *et al.*, *supra* note 23 at 286.

retaining business relationships with the audited firms. If they take an excessively permissive stance their credibility may be poor, but a highly rigorous position may cause them to lose business to more accommodating competitors.⁸⁸

Our goal here is not to settle the certification debate, but to note that the Ontario government failed to articulate *any* rationale for demanding third party certification. Nor did it acknowledge the associated trade-offs, such as the higher cost to regulated firms. As a result, it set a precedent that effectively excluded small business.

The development of Ontario's EPs regulations presented a welcome and long overdue opportunity for a serious public conversation about the role of ISO 14001 in the pursuit of public policy goals, and the relationship between voluntary standardization and official regulation generally. This would have been a good chance to articulate what should be expected from regulated entities in exchange for favourable regulatory treatment. What suffices in an environmental enforcement context (as in the case of EPs) may not, for instance, be adequate in the context of environmental leadership programs, such as the US EPA's Performance Track⁸⁹ or Ontario's Environmental Leaders program.⁹⁰ What works for large, regulated entities often does not work for small business. Additionally, what is appropriate for one regulated sector may not be appropriate for others.

Such a conversation should also have considered the mounting empirical evidence about the effects of EMSs on environmental performance, legal compliance, financial results, and competitiveness.⁹¹ Furthermore, it should have considered the inevitable trade-offs involved in any decision about departing from existing consensus-based, non-governmental standards. Extra requirements should be justified not only in terms of the public policy benefits they promise to achieve, but also against the opportunity costs. They should also consider the potential negative impacts on business certainty, risk, and competitiveness of departing from internationally accepted standards.

88. *Ibid.* at 203.

89. US Environmental Protection Agency, "National Environmental Performance Track," online: <<http://www.epa.gov/perfrac/>>.

90. Ontario, Ministry of the Environment, "Ontario's Environmental Leaders," online: <<http://www.ene.gov.on.ca/envision/general/leadership/>>.

91. See *e.g.* Prakash & Potosky, *supra* note 23.

Instead of taking the objections it received as an opportunity to engage in a serious discussion of the government's public policy objectives and ISO 14001's potential contribution to their realization, the Ontario government simply rewrote the draft regulations to remove the detailed EMS in Schedule 1 altogether. While this was welcomed by many industry stakeholders, it was no substitute for the serious reflection that is needed on the role of ISO 14001 and other voluntary EMS standards in regulation. The final EPs regulations provide for a 5 per cent reduction in the gravity component of an environmental penalty if, at the time of the contravention, the facility has an EMS in place that meets any one of the following three requirements: it is certified to ISO 14001 by an accredited ISO 14001 registrar; it is audited by an independent, certified EMS auditor who determines it to conform to ISO 14001; or it is verified by an authorized Responsible Care verifier to meet the requirements of the chemical industry's Responsible Care program.⁹² Gone is the detailed, homegrown EMS specification with all of the discrepancies and ambiguities that differentiated it from ISO 14001. Gone is the requirement to audit the EMS against the regulation, which would have blurred the distinction between a regulatory compliance audit and an EMS audit.

That much is to be congratulated. However, the government's wholesale retreat from almost all elements of the draft EMS specification left several questions unanswered. Why did it abandon the requirement for a commitment to pollution prevention? Presumably, it had given this issue serious thought and had cogent reasons for this departure from ISO 14001. The same might be asked of the other ISO 14001 "extras" that were dropped from the final version. On the other hand, why did it retain the requirement for an external audit or ISO 14001 registration? The final regulations stopped short of accommodating conformity assessment options that are financially and culturally accessible to the vast majority of SMEs. While the regulations initially apply only to large, point-source polluters, they set a precedent that will do nothing to help SMEs.

In short, instead of specifying more carefully how its vision of an acceptable EMS differed from the requirements of ISO 14001, the government simply abandoned most of the additional requirements it had initially proposed. In so doing, it passed up an opportunity for a much needed conversation about the

92. See Final EPs Regulation (O. Reg. 222/07), *supra* note 1, s. 17.

role of voluntary EMS standards in regulation. Perhaps some of this difficulty could have been avoided had the government taken different steps in the run-up to this regulatory initiative. This brings us to our fourth principle.

PRINCIPLE 4: CONNECT WITH THE EXPERTS

Our fourth principle is simple: consult relevant standards development committees when developing regulations. The Ministry of the Environment engaged in a year-long public consultation process on EPs between September 2005 and September 2006.⁹³ Phase 1 consisted of private “pre-consultations” with key industry and non-industry stakeholders. Phase 2 featured broad-based consultations across the province and ended with identification of key issues for future work. Phase 3 involved the distillation and reporting of stakeholder input and the establishment of a multi-stakeholder working group to hold focused discussions on the key issues identified in Phase 2. While all stakeholder groups were to be represented equally in theory, the majority of working group members represented large, regulated industrial facilities.⁹⁴ In Phase 4, the working group explored issues, reviewed best practices, and made detailed comments and recommendations. Finally, in Phase 5, the government reviewed and analyzed the working group’s comments and recommendations. It then prepared the draft regulations and posted them for public comment.

At no point in this process did the government specifically notify or consult the relevant organs of the National Standards System—in particular, the multi-stakeholder committee responsible for development and maintenance of national environmental management systems standards. No formal channels of communication were opened between the government and the committee until after the draft regulations were released for public comment, when

93. Ontario Ministry of the Environment, “Consultation Process: Environmental Penalties” (Slide presentation presented at the Regional Information Sessions, November 2006) [copy on file with authors]. In addition, the government commissioned research into the status of EMS adoption in Ontario and various market participants’ views of EMS standards. The researcher must have consulted a very limited range of sources, however, because the research does not appear to have turned up most of the information and concerns identified in this article, which were well known in the EMS standards community.

94. The working group had eight members representing large industrial polluters, four ENGO members, one local community group representative, one member representing health units, and one Ministry of the Environment official who acted as chair. *Ibid.*

ministry officials accepted the committee's invitation to meet and discuss the EMS component of the regulations.

This was probably an inadvertent oversight, but it deprived the government of what was undoubtedly the country's largest collective reservoir of expertise on EMS standards. It was also inconsistent with one of the fundamental principles of the Canadian standards system, a principle shared with most other jurisdictions: that there should be ongoing cooperation and communication between standards development bodies and regulators, especially in subject areas on which regulation and standardization overlap. As the Standards Council of Canada recently stated:

The effective development of a standard suitable for incorporation by reference in a legislative instrument requires that a cooperative effort between the regulatory authority and the standards development committee be established from the outset.⁹⁵

To reap the benefits of consensus-based, non-governmental standards development activities and to avoid the many potential pitfalls described in this article, governments should ensure that their key policy development and legislative drafting personnel are aware of relevant standards development committees. They should consult with those committees when developing regulations for subjects on which standards exist.

Ad hoc, project-specific consultation is only one way of engaging with—and reaping the benefits of—the voluntary standards development process. Another is to participate actively in the work of standards development committees.

PRINCIPLE 5: PARTICIPATE IN VOLUNTARY STANDARDS DEVELOPMENT

This brings us to our fifth principle for regulators: get involved in the work of relevant standards development committees in order to keep abreast of relevant issues, gain valuable insight into the reasoning behind standards, and influence the content of standards on an ongoing basis. According to the SCC,

[r]epresentatives of interested regulatory authorities should be active participants on the standards development committee. If for reasons of balance, time, or distance this is not possible, they should be associate or corresponding members who can make comments and provide input.⁹⁶

95. SCC, “Key Considerations,” *supra* note 49 at 4 (s. 4.1.1).

96. *Ibid.* (s. 4.1.3).

The Ontario Ministry of the Environment used to participate regularly in the national EMS standards committee, but this participation lapsed several years ago. Periodic invitations to renew the Ministry's participation were not acted upon. Other government officials have also sat on the committee, including representatives of the federal government, other provinces, and municipalities. Because of the "balanced matrix" rules for the composition of standards committees,⁹⁷ it would not be possible to accommodate representatives of all potentially interested government bodies. This does not prevent them from participating as observers, receiving committee correspondence, obtaining periodic updates, or submitting questions or concerns to the national committee in the early discussions of policy options or the design phase of draft regulations.

One obstacle to government participation in standards development bodies is limited resources, especially due to deep budget and staff cuts in the 1980s and 1990s. Nonetheless, many environmental agencies are now recovering from their direst straits. A more substantial obstacle is the belief that it is inappropriate for government to participate in voluntary standards development. Such participation might, it is feared, appear to confer government approval on standards or standards-setting processes which the government does not have control over and which may not enjoy democratic legitimacy. Governments also worry that participation in voluntary standards development might bind them to certain public policy choices concerning the subject matter of the standard. Finally, they may fear that their participation might lead courts to treat the resulting standard as the legal standard of conduct in civil cases or regulatory prosecutions.⁹⁸ These concerns are not unfounded, but they can easily be overblown. Government officials participate routinely on standards development committees of all kinds without approving the resulting standards for public policy purposes or foreclosing any particular public policy choices. Additionally, courts are unlikely to give much weight to the fact that government representatives did or did not participate in standards development when deciding whether a voluntary standard constitutes the

97. *Supra* notes 57-59 and accompanying text.

98. Kernaghan Webb & Andrew Morrison, "The Law and Voluntary Codes: Examining the 'Tangled Web'" in *Voluntary Codes*, *supra* note 47, 97.

benchmark for “reasonableness” in a tort action or “due diligence” in a regulatory prosecution.⁹⁹

These risks must be weighed against the advantages of government participation in the work of standards development committees. Such participation allows officials to keep abreast of the latest developments and innovations in the marketplace. It allows them to influence the content of standards. Moreover, it allows them to harness non-governmental resources and foster the reflexive, self-regulatory capacities of regulated communities in the service of public goals. In most cases, the advantages of government participation in standards development outweigh the risks.

PRINCIPLE 6: CONSIDER THE NEEDS OF SMALL BUSINESS

We now arrive at what is perhaps the toughest challenge of smart regulation: to design regulation in a way that effectively enlists small business in the quest for sustainable development. Both governments and standardization bodies have failed at this task. Neither the draft nor final EPs regulations make any effort to address small business. As mentioned, the Ontario EPs scheme applies initially to large facilities in nine industry sectors. We are not suggesting that the solution is to extend the EPs regime to all regulated facilities in the province, big and small. Nonetheless, simply ignoring the characteristics and needs of small business is no solution. This may sound like the pot calling the kettle black. The environmental standardization community has also failed to respond to the needs and challenges of small business. Both governments and standardization bodies need to learn from mistakes made to date and correct them, so that all can benefit.

1. THE SLEEPING GIANT OF THE SUSTAINABILITY STORY

Small business is the sleeping giant of the sustainability story. It has been largely ignored by policy makers and standards developers. The giant is starting to stir. And when it wakes—no matter in which direction it moves—it is likely to have major effects on the environment and society. Small businesses rarely grab media headlines, but they are well connected to their communities. They may

99. On the use of voluntary standards as legal standards of conduct in civil or criminal cases, see *ibid.*; Meidinger, *supra* note 67; Wood, “Environmental Management Systems,” *supra* note 67; and Wood, “Green Revolution,” *supra* note 67.

not have global brands to protect, but their customers trust them more than they do big companies. Small businesses cannot afford to engage in massive publicity exercises, but they have their networks. They typically do not engage in large scale political lobbying. While associations exist to lobby on their behalf (such as the Canadian Federation of Independent Business in Canada), in most countries these are dwarfed by the number and resources of big business lobbyists. SMEs are extremely numerous, widely dispersed throughout society, and very closely integrated into the social fabric of the communities in which they operate.

SMEs make up the vast majority of business organizations. In many developing countries they dominate the local economy. Even in industrialized countries, SMEs represent an overwhelming numerical majority of business organizations and account for a substantial portion of economic activity. In the United Kingdom, over 99 per cent of all businesses are SMEs.¹⁰⁰ In Canada, 1.05 million or 98 per cent of the country's 1.09 million legally constituted employer businesses have fewer than one hundred employees, 75 per cent have fewer than ten employees, and 58 per cent have only one to four employees.¹⁰¹ There are an additional 1.3 million businesses without paid employees.¹⁰² Only 0.3 per cent of Canadian employer businesses have 500 employees or more.¹⁰³ Small businesses contribute a substantial portion of a country's gross domestic product (at least 45 per cent in Canada),¹⁰⁴ and, by some estimates, much of its environmental pollution (around 70 per cent in the UK).¹⁰⁵ A majority of SMEs are micro-enterprises, typically defined in Canada as legally constituted employer enterprises with fewer than five people.¹⁰⁶ Small business represents the foundation of a national economy and has a profound impact on prosperity and environmental health. Without a successful and environmentally responsible small business sector, no economy can evolve to become sustainable.

100. Neil Gunningham, "Regulating Small and Medium Sized Enterprises" (2002) 14 J. Envtl. L. 3.

101. Industry Canada, *supra* note 7 at 7.

102. *Ibid.* at 6.

103. *Ibid.* at 7.

104. Doug Bruce, *SME Succession: Update* (Toronto: Canadian Federation of Independent Business, 2006).

105. Gunningham, *supra* note 100.

106. Industry Canada, *supra* note 7 at 5.

The vast majority of environmental regulations in Canada and many other countries are simply not designed for or applied on a substantial scale to small business. When it is, small business bears a disproportionate share of the financial burden of regulation. Annual compliance costs per employee are approximately five times higher for Canadian micro-enterprises than for businesses with 100 or more employees.¹⁰⁷ When expressed as a percentage of annual turnover, the disparity is at least tenfold.¹⁰⁸

Table 1: Estimated Financial Burden of Regulation on Small and Large Canadian Businesses

Number of employees ¹⁰⁹	Annual direct compliance cost per employee ¹⁰⁹	Total annual direct compliance cost (Col. A x Col. B)	Annual Turnover ¹¹⁰	Total annual direct cost of compliance as percentage of annual turnover (Col. C / Col. D) ¹¹⁰
1-4	\$5,317	\$5,317 - \$21,260	\$250,000 - \$999,999	2.13%
5-19	\$2,844	\$14,222 - \$54,036	\$1,000,000 - \$2,499,999	1.42% - 2.16%
20-49	\$1,922	\$38,444 - \$94,178	\$2,500,000 - \$4,999,999	1.54% - 1.88%
50-99	\$1,422	\$71,100 - \$140,778	\$5,000,000 - \$49,999,999	0.28% - 1.42%
100+	\$1,104	\$110,400+	\$50,000,000+	≤0.22%

Conventional environmental regulation typically disregards the organizational and cultural characteristics of small business. The vast majority of businesses with fewer than fifty employees do not have formalized management systems at all, but operate informally with heavy reliance on personal knowledge, memory, and informal interpersonal networks.¹¹¹ Multi-

107. See Table 1 and accompanying discussion, below.

108. *Ibid.*

109. For the source of this data, see Laura Jones *et al.*, *Rated R: Prosperity Restricted by Red Tape* (Toronto: Canadian Federation of Independent Business, 2005) at viii (Figure 2 – The cost of regulation: direct compliance costs by size of firm).

110. These are illustrative ranges suggested by the authors. There is no consistent relationship between number of employees and annual turnover.

111. Lynn Johannson, “The Challenge of Implementing ISO 14001 for Small and Medium Sized Enterprises” (1997) 7 *Envtl. Quality Mgmt.* 9 at 12 [Johannson, “Challenge”].

tasking is pervasive, with one or a few individuals performing roles that would be divided among multiple people or divisions in large firms. Initiative, adaptability, and self-reliance are at a premium. Autonomy and independence are highly valued. Governments and laws tend to be viewed with skepticism.

Small business owners are neither against environmental protection, nor what they perceive as *good* environmental regulation. The majority believe in sustainability.¹¹² SMEs, however, have a number of characteristics that impede the application of conventional command regulation: resource constraints, high compliance costs, economic marginality, a lack of environmental expertise, low public profile, and vast numbers.¹¹³ They are less likely than large firms to establish constructive, ongoing relationships with environmental licensing and inspection officials, or to engage in lobbying of policy makers. They operate on ultra slim margins. Command regulation, with its emphasis on prohibition, detailed technical prescriptions, and quasi-criminal enforcement, tends to aggravate the antagonism toward government latent in many small business owners, leading to greater resistance rather than voluntary compliance.

While recent years have seen increases in transparency and public participation in environmental law in most industrial democracies, law-making processes remain largely inaccessible to SMEs and ordinary citizens. This is even truer of administrative regulations than statutes. In Canada and other jurisdictions with parliamentary systems of government, the party holding the most seats in the legislature controls the executive. This leads to a tendency to enact vague, general, and discretionary environmental statutes that leave most of the details to be worked out via regulations and administrative decision making. This has often been accompanied by a tendency to work out the content of environmental regulation through closed-door negotiations between governments and major industrial polluters.¹¹⁴ Governments have made increasing use of public notice and comment procedures in recent years, but

112. Matthew Armstrong *et al.*, *Achieving Eco-Prosperity: SMEs' Perspectives on the Environment* (Toronto: Canadian Federation of Independent Business, 2007), online: <<http://www.cfib.ca/research/reports/tr3039.pdf>>.

113. Gunningham, *supra* note 100.

114. See *e.g.* Michael Howlett, "Policy Instruments and Implementation Styles: The Evolution of Instrument Choice in Canadian Environmental Policy" in Debora L. VanNijnatten & Robert Boardman, eds., *Canadian Environmental Policy: Context and Cases*, 2d ed. (Toronto: Oxford University Press, 2002), 25.

this is still not as common or robust as one might hope. Key discussions often still occur in closed-door consultations with big industry players and a small range of other organized stakeholders. These consultations are confined to those stakeholders who understand where and when to intervene and have the necessary resources to do so. Small businesses, even when represented by peak associations, by and large have neither the time nor the resources to engage in these processes.

2. THE SMALL BUSINESS SUCCESSION CRISIS

The problem of environmental regulation of SMEs does not exist in a socio-economic vacuum. Demographic trends in many countries project an impending succession crisis in the small business community. This crisis presents an unprecedented opportunity to help this sector embrace sustainable business practices.¹¹⁵ The Canadian small business community, like the Canadian population as a whole, is aging. A recent survey indicated that 66 per cent of Canada's small business owners, representing just under 700,000 businesses, intend to retire over the next ten years.¹¹⁶ Of these, 37 per cent want to sell their businesses on the open market, 26 per cent want to pass their businesses to a family member, and 4 per cent intend to wind up their businesses. A further 26 per cent have no exit vision, while 6 per cent responded "other," which may or may not indicate that they have planned their succession.¹¹⁷

The small business succession crisis will have profound impacts on communities and the tax base. It is also likely to trigger controversy over protected retirement plans. More importantly for our purposes, the Canadian small business community is entering a buyer's market that will continue for ten to eighteen years. With environmental protection a top priority public issue, buyers are more likely to place environmental management higher on their checklists for showing evidence of a well managed company. In this

115. Lynn Johannson, "The Confluence of Small Business, Succession and Sustainability" *ISO Management Systems* (March-April 2008) 5.

116. *Ibid.* at 6; Doug Bruce, "The Context: Turning Risks into Opportunities" in Canadian Institute of Chartered Accountants, *Succession Planning Toolkit for Business Owners* (Toronto: Canadian Institute of Chartered Accountants, 2006).

117. Doug Bruce & Derek Picard, *Succession Can Breed Success: SME Succession and Canada's Economic Prosperity* (Toronto: Canadian Federation of Independent Business, 2005) at 4, online: <<http://www.cfib.ca/research/reports/rr3007.pdf>>.

atmosphere, the presence of a robust and credible EMS could become a screening tool for a prospective buyer, or even a deciding factor when other factors are equal. So why are small businesses not racing to adopt ISO 14001? There are several well-documented obstacles to SME adoption of EMSs.¹¹⁸

Most small business owners have not even heard of ISO 14001.¹¹⁹ Among those who have heard of it, the standard is perceived (mistakenly) as something requiring third party certification by an accredited registrar. The cost of certification tends to preclude their interest. It typically represents almost 2 per cent of a small business's annual turnover, compared to approximately 0.05 per cent for large businesses.¹²⁰ For many small businesses, an expense of this magnitude can make the difference between profit and loss. The disparity is even greater when we consider certification cost per employee, which ranges from \$0.21 per employee for large firms to \$8,500 per employee for the smallest micro-enterprises.¹²¹ Even if they have the resources, paying for an EMS audit may not be the best use of their money, given the research on certification alluded to earlier. On a limited budget, better value may come from identifying their environmental aspects or conducting a gap analysis to highlight what they already do well and where they might improve.

118. See *e.g.* Johannson, "Challenge," *supra* note 111; Hillary, *supra* note 8; and Gunningham, *supra* note 100.

119. The Canadian Federation of Independent Business has surveyed its members' awareness of ISO 14001 a number of times. Johannson's firm, E2M, has conducted periodic surveys on EMS and SMEs since 1994. The results are consistent. The vast majority of small business owners, like the general public, have either not heard about ISO 14001, or do not recall it.

120. See Table 2 and accompanying discussion, below.

121. *Ibid.*

Table 2: Estimated Cost of ISO 9001 or 14001 Registration for Small and Large Businesses¹²²

Organization size (sales)	Professional fees for initial audit	Professional fees for surveillance audits	Number of employees	Total cost per employee (Cols. B+C x Col. D)
Small (\$500,000)	\$6,000	\$2,500	1-49	\$174 - \$8,500
Medium (\$5,000,000)	\$10,000	\$5,000	50-99	\$150 - \$300
Large (\$50,000,000)	\$18,000	\$7,000	100+	\$0.21 - \$248

Moreover, as we discussed earlier, certification is only one of four options for demonstrating conformity to ISO 14001.¹²³ The EMS community needs to do a better job of communicating the message that a robust and credible EMS can generate economic, environmental, and social benefits. Conformity assessment is not the first priority, and organizations may choose which of the four options best suits their needs. Even if the cost barrier can be overcome, however, there remain substantial cultural and organizational barriers to ISO 14001 adoption. ISO 14001 is currently marketed by consultants, auditors, standards bodies, and ISO itself as a formal management system designed by large firms based on their own experience. By contrast, most small businesses operate informally. They are unlikely to embrace a formal environmental management system in the absence of clear incentives, such as customers' willingness to include the cost of EMS implementation and maintenance in the prices paid for products and services, or governments' willingness to subsidize all or part of such costs. Time is another barrier. It takes time to implement an EMS. Time is a scarce and non-renewable resource for an SME.

SMEs do not just face barriers at the implementation stage. There are also serious obstacles to SME participation in environmental standards

122. This table summarizes cost estimates obtained from ISO 9001 and 14001 registrars for a research project undertaken by Johansson's firm, E2M, in 1998 [unpublished; results on file with authors; data reproduced with permission]. The professional fees were separated to show the relative cost of the initial audit ("Professional fees for initial audit") versus surveillance (follow-up) audits ("Professional fees for surveillance audits"). Anecdotal evidence obtained by the authors suggests that the disparity between registration costs for small and large businesses observed in 1998 persists today.

123. See *supra* note 83 and accompanying text.

development. The same resource, knowledge, and time constraints that prevent small business from participating effectively in public policy processes apply to standards development. Small business participation in TC 207 (the ISO technical committee responsible for EMS standards) has been woefully inadequate from the start, and most national mirror committees have fared no better. TC 207 has struck a series of internal task forces in recent years aimed at identifying and overcoming obstacles to SME participation. Yet these task forces have had almost no SME representation. The few small business associations that have actually attempted to participate in TC 207 have been ignored, and have felt alienated and frustrated.

Standards development bodies need to develop a much better understanding of the nature and culture of small business. This will entail developing ways to market the key elements of ISO 14001 to small business that will bring SMEs the greatest value and help them move quickly towards sustainability. Just as full compliance with all theoretically applicable laws is typically not an entry level environmental management proposition for small business, full EMS adoption based on the degree of formality found in larger entities may not be suitable either. While some SMEs may benefit from increased formality,¹²⁴ many standards developers, consultants, and auditors who market ISO 14001 presume a degree of formality far beyond what is suitable or realistic for the vast majority of SMEs.

TC 207's response to this problem has been to initiate work on ISO 14005, a guide for "phased implementation" of ISO 14001.¹²⁵ If recent drafts of this guide are any indication, it is unlikely to solve the problem. All the classic flaws are there. It assumes that SMEs can ingest an excessively formal management system simply by breaking it into pieces to be swallowed sequentially. Experience with phased implementation of EMS standards in Europe suggests that many SMEs will either not complete all stages, or regress when government subsidies dry up. Phased implementation itself is not the problem. It takes time for any organization, big or small, to implement a robust

124. See Hillary, *supra* note 8 at 144.

125. ISO/TC 207/SC 1, *ISO/CD 14005.2, Environmental management system – Guide for the phased implementation of an environmental management system – Including the use of environmental performance evaluation* (Committee Draft 2, 14 February 2008) [copy on file with authors].

and credible EMS. However, staged *verification* may risk diluting the credibility of ISO 14001 if organizations can stop part way through yet still claim the reputation-related benefits of ISO 14001 adoption.

The current draft of the phased implementation guide is an unwieldy and complex document, more than twice the length of ISO 14001. It is far too long to be of use to any small businesses that want to implement an EMS. If ISO 14005 is published without substantial changes, it will be an embarrassment to ISO at best, or it will drive an irrevocable wedge between ISO and small business at worst.

Both governments and standards development bodies have failed to respond adequately to the characteristics and challenges of small business. EMS standards and EPs regulations are only small manifestations of this larger problem. In the concluding section of this article, we speculate about where this leaves us on the path toward smart regulation and sustainable development.

IV. CONCLUSION

The experience with the incorporation of environmental management systems into Ontario's environmental penalties regulations suggests six principles for incorporating standards into environmental regulation. First, do not reinvent the wheel. If a standard exists that fulfills the objectives of a proposed regulation, and the standard was developed by a recognized standards body through a relatively robust multi-stakeholder consensus process, regulators should incorporate the standard into the regulatory scheme to the extent possible and appropriate. Second, strive for consistency. Avoid proliferation of unexplained discrepancies between the proposed regulation and the standard. Third, make any extra requirements clear. If an existing, widely accepted standard does not, on its own, meet all the public policy goals of the proposed regulation, indicate clearly how the standard is deficient and what more is required to meet public policy objectives. Fourth, connect with the experts on the relevant standards development committees. They have been through almost every argument imaginable in developing the standard and bring a reservoir of knowledge and experience to the public policy table. Fifth, get involved in standards development. Where the opportunity exists, participate directly in the work of relevant standards development committees to keep abreast of relevant issues and influence the content of standards. If committee

membership is not an option, take advantage of other forms of involvement. Finally, consider the needs of small business. Both regulators and standards development bodies should address the special characteristics and challenges of the SMEs that make up more than 95 per cent of the business community. Ignoring them will impair economic, environmental, and social well-being.

The first five suggestions have the potential to advance smart regulation in modest but significant ways by—among other things—saving government policy development costs, enlisting non-governmental expertise, enhancing uniformity of business requirements, taking advantage of market forces, and enhancing the reflexive capacities of regulated entities. Our sixth suggestion, however, has truly transformative potential and represents a fundamental challenge for both regulators and standardization bodies. Designing and implementing regulatory systems that effectively mobilize small business will be critical to sustainable development. While debate continues to rage on the meaning of sustainability and sustainable development, there is little doubt that they represent the single largest challenge now faced by humankind. The recent media frenzy related to one issue, climate change, has led to heightened public awareness and concern. Politicians have put the environment higher on the policy agenda, but progress has been frustratingly slow.

It is beyond the scope of this article to speculate further on what a sustainable economy might look like, or what the relationship should be between smart regulation, small business, and sustainability. What we will say is that there is a renewed sense of urgency in the air, driven largely by the challenge of responding to climate change. This urgency will soon be intensified by a growing number of small business owners wanting to retire. This succession crisis will not be contained within the Canadian small business community. Policy-makers and shapers around the world, and at all levels of government, need to understand the confluence of these issues, and how pervasive the impacts will be.

It may still be possible to transform this demographic bust into an environmental boon, but we have a very small window of opportunity. Whether it is climate change, small business succession, or sustainable development generally, the window for effective action will close very soon. The next two to three years are probably the most critical, putting the challenge well within the planning horizons of today's politicians and investors. The magnitude of the challenge should not be underestimated, but the time for action has arrived.

GLOSSARY

AP	Administrative Penalty
CAC	Canadian Advisory Committee
CSA	Canadian Standards Association
EMAS	Eco-Management and Audit Scheme (European Union)
EMS	Environmental Management System
ENGO	Environmental Non-Governmental Organization
EP	Environmental Penalty
ISO	International Organization for Standardization
P2	Pollution Prevention
POP	Prevention of Pollution
SC 1	Subcommittee 1 (Environmental Management Systems) of TC 207
SCC	Standards Council of Canada
SME	Small or Medium-sized Enterprise
TC 207	ISO Technical Committee 207 (Environmental Management)