IIIEE Master's Theses 2004:9

Sharing uncertainty and responsibility?

Voluntary environmental agreements in developing countries: the case of South Africa

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Thesis for the fulfillment of the
Master of Science in Environmental Management and Policy
Lund, Sweden, October 2004

The International Institute for Industrial Environmental Economics
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ISSN 1401-9191

Acknowledgements

This is my second academic work. And my first research experience in a developing country. During the period dedicated to write this thesis I discuss a lot with members of NGOs in South Africa about the challenges of their society. This short paragraph in the beginning of the thesis wants to represent the special value that I gave to the ideas and emotions that they have shared with me.

> "In NGOs' various comments on voluntary initiatives, a number of common themes emerge. Voluntary initiatives are meant to contribute to transforming business and industry so that it is more socially and environmentally responsible and sustainable. Just as societies need more than laws and policies to guide behaviors, but also moral laws and ethical principles and visions of better way of life, corporations needs more than government regulations, consumer boycotts and bad press to guide their policies and actions. Ideally, voluntary initiatives are a way to improve corporate products and production process, as well as, management practices and values, so that they contribute to an improved society and quality of life. On the other side of the coin, voluntary initiatives can also be used as clever strategies for cheating society and other companies, improving public image while covering up irresponsible harmful actions. Despite that most NGOs realize that, beyond stick and carrots, the real solution to the problem of unsustainable and irresponsible business is the qualitative transformation of business and the nature of business itself. "
>
> Jeffrey Barber,1998

I'm grateful to have written this thesis supported and beloved by all my friends, my family and my mates of this adventure that is call Master in Environmental Policy and Management at the IIIEE institute. Our institute has seen heterogeneous groups of students that, year after year, spend day and night time discussing, writing and searching for new ideas and contributions to envision a world with less stress, social injustice, wastefulness and pollution. I'm happy that this happened to me too; I found precious to have around the humor of Marla, Caro, Vishal, Anda, Nino, Bea, Matt, Alé, Bigge, Jeehey, Georgi, Lloyd, Bo, Victory, Ian, Katrine, Caren, Sasha, Anders, Dag, Margrethe, Åsgeir, Nareta, Dan, Ke liu, Yusuke, Ali and Anthony. They were always available for comments, suggestions or a beer to give ourselves a break. A special thanks to my Batch, all of them, for the special moments we had. I'm looking forward to see all of you, again and again, in another part of this world (let's go South!).

I appreciate the hospitality of Cape Town and its habitants. I'm grateful to the University of Cape Town and its researchers, the Municipality of Cape Town, the Province of Western Cape and all the consultants, NGOs' members and professionals that I have contacted and interviewed, for their patience and contributions.

I had a new family (Julie and Phil with Kitten and Tulip) and good friends (Sophie and Tania) that have helped me with the movements and the understanding of a different society, always answering my questions and curiosity. They make me feel at home, and teach me how to cook great dishes with chili, ginger and chicken. I will always keep their smile in my memories.

Finally a special joy has been to work with my supervisors Thomas Lindhqvist, Jonathon Hanks and Carl Dalhammar that have welcomed my research ideas and helped me providing direction and continuous comments. Thomas and Jonathon are both two incredible dedicated professionals and workers. I had freedom of movements in the design and conduction of interviews and data gathering; they have always trusted me and motivated to meet new contacts and ideas. While Carl has effectively helped me to argue my opinions considering different perspectives than the optimistic one, where I easily refuge. Thank you, your guidance means a lot.

Abstract

Developing countries are particularly new to the usage of voluntary environmental agreements and they have not fully explored the opportunity to take advantage of companies that are willing to regulate themselves voluntarily. Their formal regulative environment is *often* hampered by the absence of clear and enforced environmental standards, lack of human and financial resources.

This paper provides a discussion and some first empirical data on the determinants for a future wider usage of voluntary environmental agreements in poor regulatory environments, where voluntary agreements can be seen, also, as means to enhance regulatory and enforcement capacity of both the private and the public sectors. The analysis, based on the regulatory reality of South Africa, explores the preconditions for the promotion of a voluntary agreement on energy efficiency in the Province of Western Cape. It also proposes how to intervene in the system to make these conditions more supportive for the development of co-regulation. Among external sources of pressure, it emerged a confusion generated by a plurality of regulators, the sibylline role of NGOs and the necessity of a promoter and a coordination body that should not be necessary provided by the government.

The results show that there are potentials to make the cooperation works and dynamic when the parties recognize uncertainty about regulation enforcement and future regulation. The research also reveals that the idea to use voluntary agreements is welcomed even if it appears very novel to most companies, government officials and NGOs. Therefore action has to be taken at different level to explain voluntary environmental agreements as participative policy tools to local authorities and NGO members.

Executive Summary

Voluntary agreements have been used extensively for more than two decades in USA, EU, Japan and Canada to address emerging and diffuse environmental[1] pressures. They have reached the level of maturity that they have become an innovative laboratory for policies development.

These voluntary instruments are meant to promote a high-level information flow and dialogue between the private sector and the public one and proactive attitudes towards environmental and development problems. The companies that enter one of these agreements commit themselves to certain environmental targets, practices and monitoring procedures for a timeframe that is normally between five and ten years.

One of the relevant characteristic that makes voluntary agreements interesting is the flexibility that is given to the parties to achieve the negotiated target. Another important aspect is the learning potential of the process itself: cooperative attitude, identification of long term policy objectives, strategy development, regulatory capacity, enforcement capacity, etc.

Disregarding the fact that literature presents different opinions and perceptions on the effectiveness and efficiency of voluntary agreements, their logic is promising: they utilize the informal regulatory and enforcement capacity of companies.

Developing countries are particularly new to the usage of voluntary environmental agreements and they have not fully explored the opportunity to take advantage of companies that are willing to regulate themselves voluntarily. Their regulatory environment suffers from the absence of clear and enforced environmental standards, lack of personnel and appropriate technologies to monitor the protection of the environment. Consequently it seems that there are potentials to use them extensively whether other policy instruments have failed or are difficult to be implemented.

Current research has, however neglected a systematic understanding of the phenomena of voluntary environmental agreements in developing countries conducting for example ex-post evaluations and comparative studies.

The political process of these agreements and the achievements derived are affected by what is called the socio-economic context of the agreement. This study explores the preconditions for the development of a voluntary environmental agreement on energy efficiency in the Province of Western Cape, in South Africa. The theoretical framework used for the analysis is derived from comparative studies of voluntary agreements developed by international projects. It investigates:

1) The policy tradition in the area of energy policies at local level and the attitudes towards consensus-seeking: From the research, it emerges that there is a tradition in consensus seeking and NGO involvement in policy making processes, even if NGOs are funded also by the local government.

[1] The term environment is use in this thesis giving it an holistic valence, environment is everything that is around us, including the social environment, the cultural environment, the natural environment, the economic environment and the political environment.

2) The existence of alternative legal instruments as a back-up measure: It seems clear that in order to legislate on energy issues, coordination has to be achieved between a plurality of national and local institutions.

3) The sector structure: The research reveals the interest of a small number of players in the area of energy management. Most of these actors are considered front-runners.

4) The market position of a number of actors that might be strategic to involve: The companies like Cape Saw Mill, South African Brewery that export the most are the ones more affected by competition and consumer pressure. The beverage sector and the insurance sector might, more than other sectors, be pressured to go green by the black empowerment employment charter.

This methodological approach, to my knowledge, has been applied to the context of a developing country for the first time.

South Africa attired my attention because it has recently legislated on the use of Environmental Cooperative Management Agreements, as these voluntary agreements are called. In 2000, the national government launched four negotiation processes with different industry sectors to address air and other types of pollution. Uncertainty regarding future regulation and the role of stakeholders like NGOs and community-based organizations has created growing resistance and public opposition. In 2001, the negotiations were interrupted, just before they were supposed to be presented as show cases at the UN World Summit on Sustainable Development (UNWSSD), in Johannesburg.

Building on the barriers encountered at national level, the information gathered through the analysis of the socio-economic context and the literature review, the last part of the study proposes how to intervene in the area to make the conditions even more supportive for the promotion of voluntary agreements on energy efficiency. Enhance energy efficiency in Western Cape, and in South Africa in general, is particularly challenging due to the current price of electricity that is among the lowest in the world.

However, there are some key aspects that can help the actions of single (companies, Eskom[2]) and collective actors (local authorities, NGOs, local communities, Chamber of Commerce and industry associations) to become coordinated and organized around a common objective and to be able to plan action towards a long-term target. These are:

- Explain and communicate voluntary agreements as a participative policy tools to companies, government and NGOs members

- Recognize uncertainty about the regulatory environment on energy policies

- Create a dialogue with industry on energy

- Learn about the link between energy efficiency and poverty, and raise awareness about the insufficient producing capacity for the growing energy needs of the economy (Eskom is expected to run out of capacity in 2007)

[2] Eskom is sixth electricity producer and distributor in the world. The company run a monopoly the facto in South Africa and it is involves in a lot of energy projects all over the African continent.

- Establish new bodies dedicated to the negotiation processes

At another level the case study offers to the author the opportunity to reflect on the determinants that can influence the future use of voluntary agreements in developing countries.

From the discussion it emerges the importance of the administrative capacity needed to coordinate the organization of the activities of the voluntary agreement. The development of this capacity is the precondition to enter any process of governance. A plurality of actors can, however, become the promoter of a voluntary initiative, including NGOs members, internationally or private funded project (like CDM or Chemical Alliance projects), Chamber of Commerce, industry associations. Another main determinant regards how to overcome the lack of initiatives, willingness and ability to resolve some environmental problems in poor regulatory realities. Action should be taken to stimulate co-regulation at every level: locally, nationally and internationally.

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1 Introduction

Society is developing into complex systems, made up of subsystems characterized by interdependence of components, adaptive attitude, positive and negative feedbacks, cumulative effects and circular causation, which has been exposed to situation of stress by urban and industrial development.[3] Environmental and development problems are typically multidimensional, multidisciplinary and multi-sectoral; they require time for a collective understanding of the problems and a collective response. This suggests that governing our modern society in the direction of sustainable development needs new forms of organization and governance and new tools for governing it. It is often argue that sustainable development demands a transition from government to governance[4]. None of the usual options; the market, conventional regulatory authority and customary propriety rights, can on its own meet the challenge of moving towards sustainable development in a dynamic, globalizing, unequal political economy. At least, they cannot do so as usually applied and incautiously associated. Efforts to build a coherent set of motivations for voluntary initiatives are unlikely to be sufficient either. But, the practice, the exercise of building such a set of motivations that motivate to responsible and environmentally sound initiatives is necessary. Voluntary initiatives can be effective in promoting long-term cultural change in business management, making entrepreneurs desire to shift from a reactionary, end-of-pipe and financial cost attitude to a proactive, cleaner production, long term and economic-saving behavior.

When I started to study policy instruments for environmental protection, a question arises to my mind: Why can't we take advantage of companies that are willing to regulate themselves in a collective effort towards a better environment?

Voluntary environmental initiatives have gained momentum in the late 1980's when they became popular governance tools in United Stated, Europe and Japan addressing environmental pollution. They have proposed a top-down/bottom-up approach, creating partnership between the public and the private sector to promote collective awareness for environmental protection. Voluntary environmental initiatives and in particular voluntary agreements are interesting to be studied since they have been successful in achieving results where other policy tools have failed.

The problem of non-compliance with policies and legal requirements concerning environmental protection has various causes. Among others, the fact that some of them are top-down policies, where the private sector, which the policy wants to address, has not been engaged in the decision making process. As mentioned before, the effects of industrial activities on the environment can be minimized in different ways, one being trough a cooperative effort. It is interesting to investigate the opportunities of cooperation between the

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[3] A. M H Clayton, N. J Radciffe. (1997) .*Sustainability. A systems approach*. Earthscan, London p.185-

[4] Rhodes refers to the term governance as the process or method by which society is governed, or the condition of ordered rules. This definition refects the structure and processes of regionalization and decentralization, which have tended to build on previously informal interactions between government and other actors.

R.A.W. Rhodes. (1997). Understanding Governance, Politics and the State. Macmillan, Basingstoke, UK *in OECD,UNDP. (2002). Sustainable Development Strategies. A resource book. Earthscan, London p.19*

Wilson defines local governance as the active inclusion of a wide range of public, private and voluntary sectors actors in carrying out policy on the ground.

D. Wilson (2000). Towards Local Governnace: Rhetoric and Reality. Public Policy and Administration. Vol 15 N°1 p.43-57 *in OECD,UNDP. (2002). Sustainable Development Strategies. A resource book. Earthscan, London p.19*

government and the private sector through voluntary initiatives on the environment, at least for two reasons: the fact that they can lead to a win-win situation where both parties have something to gain, and the fact that the creation of a collaborative environment can support shared responsibility, joint problem solving and innovative solutions. Voluntary initiatives are maturing to the point of creating growing expectations, especially as part of policy mix. They have become a fascinating laboratory for innovation in policy, stimulating the path of multi-level multi-stakeholders governance for sustainable development.

However, it is not enough to call for multi-stakeholder or regional partnership between the government and the business community, even if today multi-stakeholder collaboration is a recognized strategy in the area of environmental management and sustainable development.[5] The transition from a regulatory model towards one of dialogue and collaboration, where stakeholders acquire new roles, requires competences and certain preconditions. Some of these competences regard the ability to engage the business community in these collective efforts towards sustainable development, especially, when the "low hanging fruits" (profitable, easy and inexpensive improvements) have been picked and further corrections are expensive, as well as technically and organizationally difficult. It is interesting to observe that obstacles might be simply due to a lack of time, motivation, trust, or the fact that the benefits derivable from the agreements between the public sector and the business community has not been communicated efficiently. However, without the engagement of the industry sectors, little can be done in terms of rethinking and readdressing the needs of the society as a whole. The public authorities have a central role in this process, they need to be committed to engage the second and the third sectors, and they also need to be open to improve their abilities in doing that. Additionally, when there are no conditions for consensus seeking at national level, the local authorities have to be empowered by the central government to enhance environmental protection with the business sectors locally.

Environmental and development problems even more challenging in developing countries, and often there are little opportunities to promote environmental protection rather than with voluntary initiatives that established targets or a scoreboard of intents with some industry sectors. A collaborative approach to foster environmental protection has also been proposed in a context of weak regulatory frameworks (especially for implementation), or more often in the phase of creation of a regulatory system for environmental protection, typical of developing countries. There is the view that the agreements can be an opportunity to be used by the government to gain data and better understand the problems related or locked in the industrial processes. The context of trans-boundary modes of production and consumption, created by the spread of multinationals in the less developed world, has resulted in a tremendous challenge for the governments of these countries that have to regulate powerful actors that generate more profits that the entire GDP of the country. These multinationals have the competences to enhance environmental protection, but are frequently not using them since they are not forced by regulation and not motivated or engaged by governmental or internationally sponsored initiatives. The World Bank, the UN system and some major NGOs, like WWF, have promoted wide initiatives like Global Compact[6], the Forest Steward Council and more localized one like the Mexican project in Guadalajara with the intention to improve the environmental performances of companies operating in developing countries. However, even within these initiatives a lot of further improvements can be achieved.

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[5] Z. Fadeeva.(2004). Promise of sustainability collaboration – potentially fulfilled? *Journal of Cleaner Production* Vol°12 p. 1

[6] Global Compact was launched in 1999 by the UN General Secretary. Available on-line at www.unglobalcompact.org/Portal/ [10 July 2004]

According to A. Aggeri, M. De Clerq and A. Suck two different types of voluntary agreements have been developed in the past decades: the so called *implementation agreements* devoted to the diffusion of environmental technologies and solutions that already exist[7] and the *innovation agreements* that create a supportive environment for consensus to new solutions for environmental protection. The first generation of environmental agreements were signed in the beginning of the seventies, when the definition, the setting and the control of regulations were too difficult and the cooperation made possible to transform firms into partners of the regulatory process. The second generation of agreements was implemented in a context of newly emerging and established administrative structures for environmental policy and the promotion of sustainable development.[8] To some extent, the situation in developing countries is not dissimilar from the context of the first generation of agreements, since it is characterized by the beginning of environmental agencies and the establishment of new institutional structures that have to deal with a deficient legal framework, limited resources and means of control that make, in the end, sanctions not dissuasive enough. On the other hand, there are some similarities to the context of the second generations; they are enhanced also by international projects and public concern for the promotion of sustainable development; aiming to help developing countries to address diffuse pollution, local and global environmental problems. Among developing countries, some governments, like the South African, have recognized the opportunity that voluntary initiatives represent for their countries and they have tried to implement them through wide negotiation processes that have involved industry associations and governmental bodies.

1.1 Background and definitions

The term voluntary agreement is not always used consistently. Especially in different national contexts, the same term may be used to mean quite different things, especially regarding their legal status. UNEP dedicated in 1998 a number of the review Industry and Environment on voluntary initiatives; its articles contributed to establish a common understanding of voluntary environmental agreements. A voluntary agreement in the Netherlands is called "covenant" or "environmental contract" and it is a legally binding environmental contract, negotiated between the government and industry, in which all companies are expected to participate. In United States instead a voluntary agreement is called also negotiated agreement and it is generally understood to mean a non-binding program in which companies decide individually whether and to what extent they want to participate. In literature there are a number of different definitions of voluntary agreements that are reported in this paragraph. The following one represents the view of the author.

Voluntary agreements are a group of voluntary initiatives characterized by a consensus result achieved after negotiations between a least two parties: the public and the private sector. These agreements are signed by public authorities at national, regional or local level and single companies, group of companies or industrial associations representing individual firms of a

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[7] Note that during a workshop of the Green Week 2004 to present the European initiative ETAP for the creation of a market for environmental technologies, the British Industry Association has defined that sector as a regulatory driven sector.

[8] F. Aggeri. (1999*). Negotiated agreements and innovation: a knowledge based perspective on environmental policies.* FEEM paper

M. De Clercq, A. Suck. (2002) Theoretical reflections on the proliferation of negotiated agreements in *M.De Clerq. (2002). Negotiating Environmental Agreements in Europe. p. 30*

branch or a sector.[9] In same case NGOs, trade union, Community association are also parties of the agreement, in other they have a role of observers.

Similarly Patric ten Brick defined voluntary agreements as are government sponsored programs that encourage firms to improve environmental performance and receive public recognition for that.[10] Jonathon Hanks[11] proposed the terminology voluntary agreements as co regulatory instruments while Jorge Rivera[12] privileged the aspect of the economic incentives calling them incentive based instruments.

When used to promote environmental protection, they can be described as environmental policy processes in which private agents choose to participate, even though they are not forced by the law. The process can be divided intro three phases (that might overlap): the definition of the objectives (what are the environmental objectives or the implementation goals?), the definition of allocation rules (how are the responsibilities and the benefits to be distributed?) and the implementation and control of the adopted measures (how are they implemented and monitored?). The assessment of the process results is done by the parties, or by a third independent one, and is also aiming at provide useful information for further development of the agreement.[13]

Some authors consider[14] the label given to these initiatives misleading since they are rarely voluntary in the usual sense. The relevant actors involved have been effectively pressured or prepared to act. The distinguishing feature of "voluntary" initiatives is that the pressures are not directly from regulatory obligations. Indirect regulatory effects and pressure of other kinds are crucial. The voluntary character of the action undertaken by the polluting firms or sectors is relative, since it is limited, just to name some of the barriers, by the conflicting interest of the parties, the socio-economic context, the adequacy of motivations to act responsibly and the trust between the government and the industries. It is interesting to point out that compared to regulation; voluntary initiatives tend to place greater reliance on corporations to act in the public interest, giving them more flexibility in how to reach the environmental improvements. There have been different attempts to conceptually categorize voluntary agreements. The EEA in 1997[15] and the OECD in 1999[16] distinguished between *target-based* and *implementation-based agreements*. When the target is set within the framework of the regulatory legislative process by government, and the voluntary approach only consists in electing and implementing the measures to achieve it, then the agreement was named implementation-based. This is the case where existing and explicit objectives in national

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9 M. De Clercq. (2002). *Negotiating Environmental Agreements in Europe.* Edward Elgar, UK p.10

10 P. ten Brink. (2002). *Voluntary Agreements. Process, Practice and Future Used.* Prologue.

11 P. ten Brink. (2002). *Voluntary Agreements. Process, Practice and Future Used.*p. 159

12 J. Rivera. (2002). Assessing a voluntary enviornmnetal initiatives in the developing world: The Costa Rican Certification for Sustainable Tourism. *Political Science.* Vol 35.p. 333

13 M.M. Cabugueira. (2002). Co-regulation performance factors. Lessons from theory and from practice in environmental agreements in *P. ten Brink. (2002). Voluntary Agreements. Process, Practice and Future Used. p. 399-*

14 R.B. Gibson. (2000). Encouraging voluntary initiatives for corporate greening. Some considerations for more systematic design of supporting framework at national and global level. Paper presented at the UNEP Voluntary Initiatives Workshop. September 2000. Paris. Introduction.

M. De Clercq, A. Suck. (2002) Theoretical reflections on the proliferation of negotiated agreements in *M.De Clerq. (2002). Negotiating Environmental Agreements in Europe. p.9-*

15 EEA. (1997). *Environmental Agreements: Environmental effectiveness.* Copenhagen

16 OECD. (1999). *Voluntary approaches for environmental policy in OECD countries: An assessment.* OECD, Paris

strategies or local action plans are partially, or totally, addressed using voluntary agreements. When the environmental objectives are set by the parties involved in the voluntary approach, the agreement was called target-based.

Others authors have expanded the definition of voluntary agreements across three functions: the bridging function, the supporting function and the independent[17] function. The bridging function is determined by the fact that voluntary initiatives are used as an intermediate step en route to legislation. For example, accessing countries to the EU have often progress towards EU requirements through voluntary agreements.[18] Developing countries like Chile, Brazil, Mexico, Argentina, Costa Rica have also used them in the transition towards the creation of a regulatory framework. The supporting function occurs where the agreement supports the implementation of requirements under legislation or related to existing legislation. The independent functions are characterized by the fact that the objective of the agreement is not related to existing or anticipated regulation. This is the case of the Swedish EKO agreement promoting EMAS and ISO 14001 certification.[19]

As mention before, F. Aggeri, M. De Clerq and A. Suck have observed a qualitative change in the implementation of the agreements during recent years. They recognized that the transition, from a passively negotiating, regulating and controlling state, to a more actively coordinating and innovation managing state, has been accompanied by a change in nature of voluntary agreements, or an evolution. The early generation of agreements, defined as implementation agreements, fits with a more traditional view of government tasks and duties. The second generation tries to address more fundamental and complex problems related to sustainability. They address diffuse pollution, whereas before they where concentrated on localized pollution. The new generation of agreements has been defined innovation-oriented agreements. They are characterized by diffuse pollution, complex interdependencies between causes and effects, a high degree of uncertainty and innovation as a central challenge. They promote innovation at source approach aiming at reducing pollution by re-engineering the whole process or products. Here, the change is much more important and may concern a wide range of actors, organizations and technologies, since many problems require an extensive cooperation between heterogeneous actors.[20]

The logic of voluntary agreements is promising, they attempt to overcome some limitations to command and control regulation by making use of the entrepreneurial dynamism and informal advantages of the business sector, promoting the involvement of the business community in the policy making process. Agreements can be used as a stand-alone policy instrument or they can be part of a policy mix, including taxes, subsidies, regulation, etc. They seem to have potential in both ways. The Netherlands' agreement scheme (Dutch covenants) has worked mostly as a stand-alone scheme, whereas the Danish agreement scheme has always been tightly

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17 P. ten Brink. (2002). *Voluntary Agreements. Process, Practice and Future Used.* p.18-

18 See The Finnish packaging waste agreement in 1997 in *R.Sairine. (2000). Regulatory reforms of Finnish environmental policy.* Helsinki University of Technology;

The Czech agreement on the gradual lowering impact of washing powders on the environment in 1995 and the agreement on the disposal of management of packaging materials in 1999 in A. Dvořak et al. (2002) Negotiated voluntary agreements. The case of the Czech Republic *in P. ten Brink. (2002). Voluntary Agreements. Process, Practice and Future Used.* p.207-

19 P. Helby. (2002). Environmental agreements at European Community level – reflections based on member states experience. *Journal of Cleaner Production* 10, 183-193. p. 189

20 F. Aggeri. (1999). *Negotiated agreements and innovation: a knowledge based perspective on environmental policies*. FEEM paper p. 3-

M. De Clercq, A. Suck. (2002) Theoretical reflections on the proliferation of negotiated agreements in *M.De Clerq. (2002). Negotiating Environmental Agreements in Europe. p. 9*

integrated with taxation. Agreements can be directed towards large parts of industrial production, as in Germany, the Netherlands and Chile, or towards specific niches as in Sweden, Denmark and Mexico.[21] Moreover voluntary agreements and programs differ on the subject of "targeting" – some voluntary approaches are directed at industry stragglers vs. innovators, others target technology components vs. "systems technology," and others target industry end-users vs. suppliers.

We observe different contracting obligations, however, in most cases, the agreement includes explicitly the affirmation of the government not to introduce a new piece of legislation (for example an environmental standard or an eco-tax) unless voluntary actions fails to meet the environmental objective or the implementation goals and schedule.[22]

Some of the reasons why voluntary agreements have been increasingly looked at as a possible appropriate instrument to help address environmental challenges are powerfully described by P. ten Brick. He considered them "an opportunity to promote the practice of shared responsibility and the related concept of shared uncertainty for environmental problems, building on industry knowledge".[23] They can stimulate the involvement of relevant stakeholders in the decision-making process, as the stakeholders know better how they affect the environment or are affected by the environmental problems. This can be easily related to the issues of equity and democracy, as the affected parties should arguably have something to say on matters concerning their welfare.

Through the negotiation of the voluntary agreements, problems can be identified and recognized. Therefore, solutions can be proposed at a level that most effectively can address the problems. This has led academics, researchers and officials to realize that agreed targets with the business sectors are sometimes more appropriate than the ones decided by the government alone.

Another incentive to adopt voluntary agreements is the attempt to reduce the amount of public administration, since less regulation and enforcement is required to reach the same environmental objective, when the private sector assumes a share of the responsibility for regulation. Finally there is interest of building formal and informal networks across regulating bodies, environmental institutions, industry, trade unions and non-governmental organizations. Voluntary agreements may result in more coordinated regulatory efforts by promoting, for example, an integrated permitting system.

Some regulatory gains are mentioned as important by the Business and Industry Advisory Committee (BIAC) and the Trade Union Advisory Committee (TUAC) to OECD when they were asked to comment the OECD Report on Voluntary Approaches for Environmental Polices. Voluntary approaches provide business with the opportunity to develop solutions that are appropriate to each sector and/or firm. The increase of flexibility (mostly in achieving the standard rather than setting it) enhances the potential for innovation and promotes dynamic efficiency. By providing long-term certainty, voluntary agreements are more likely to give inventive to the adoption of long-term integrated industrial strategies, investments and

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[21] Voluntary Agreement, Implementation and Efficiency (VAIE). (2000). *Country reports*. Available on-line at http://www.akf.dk/vaie/

World Bank. (1998). *Mexico: The Guadalajara Environmental Management Pilot*. Washington DC World Bank

UNEP. *Acuerdos de producción limpia in Chile*. Available on-line at http:// www.uneptie.org/pc/cp/reportspdf/

[22] F. Lévêque. (1998). *Voluntary approaches*. Environmental Policy Research Briefs. CERNA paper N° 1 p.13

[23] P. ten Brink. (2002). *Voluntary Agreements. Process, Practice and Future Used*. Prologue.

research projects. Getting relief from the pressure of a coming regulatory measure, the industries can plan a longer-term investment plan that is able to deliver competitive advantage and better environmental performance. The combination of flexibility, in how to reach the target, and the agreed political insurance not to have regulations for the time covered by the agreement, might result in a really attractive advantage for the business sector, especially in an instable globalized market. By being the first mover in the regulatory process, firms also hope to save money by lowering costs for compliance.

A company or a business sector may implement environmental agreements also as a result of non-regulatory pressures. The local and international community, together with NGOs and media, can demand actions. Under the threat of loosing company reputation, the incentive to be collaborative becomes stronger; the PROPER initiative in Indonesia and the Green Rating Project in India are such examples. The voluntary agreement may also enhance the company market and create financial opportunities, raising the environmental standards at the international level. An example is the Mexican Guadalajara agreement that promote environmental management systems among small and medium enterprises using a tutoring strategy, financially supported by the World Bank.

1.2 Research problem

The literature on environmental policies has dedicated a lot of attention on voluntary environmental agreements as co-regulation and incentive based policy options. Their appropriateness to address complex environmental problems have been analyzed, their potential as participatory processes and their achievements has been evaluated. Beside the fact that there are divergent opinions and different perceptions on their effectiveness and efficiency, their importance is recognized by a number of international research projects. This political tool has gained attention and legitimacy also in developing countries. Freitas and Gereluk did an early evaluation of the National agreement on benzene in Brazil.[24] Jorge Rivera analyzed the economic benefits gained by firms that signed the Costa Rican Certification for Sustainable Tourism.[25] Jonathon Hanks discussed the extent to which voluntary environmental initiatives may be adopted within developing countries.[26] Current research has however neglected a systematic understanding of the development of the phenomena of voluntary agreements in developing countries. There are not comparative analysis of different voluntary environmental agreements or an evaluation of the qualitative and quantitative evolution of these tools over the last decade. If some of the achievements of single initiatives have been communicated via scientific papers or often by other media (including web sites and local press); a broader understanding of the reasons why voluntary environmental agreements have not been used more widely in the context of developing countries, or in other terms of the difficulties encountered lacks of scientific investigation.

This research consists of two parts: a contextual analysis of the Province of Western Cape in South Africa to assess the potential to use a voluntary environmental agreement for energy efficiency; and a systematic discussion on the determinants factors that can influence the future use of voluntary agreements in developing countries. The decision to focus the first part of this research on the Province of Western Cape, is justified by the fact that the

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[24] N. Freitas, W.Gereluk. (2002). A National Tripartite Agreement on Benzene in Brazil in P. Ten Brink. (2002). *Voluntary Agreements. Process, Practice and Future Used. p.176-190*

[25] J. Rivera. (2002). Assessing a voluntary environmental initiatives in the developing world: The Costa Rican Certification for Sustainable Tourism. *Political Science.* Vol 35.p. 333-60

[26] J. Hanks. (2002). A Role for Negotiated Environmental Agreements in Developing Countries in P. Ten Brink. (2002). *Voluntary Agreements. Process, Practice and Future Used. p.156-175*

government of South Africa has recently legislated on Environmental Management Cooperation Agreements, as are called voluntary agreements, and it has tried to promote them at national level. However the negotiations encountered difficulties and the process was stopped. Therefore it was interesting to explore the limitations of the process and try to overcome them in the design of a new EMCA on energy efficiency. The understanding derived by the first part of the research has been used to build on, together with a literature review, a systematic discussion on what can be determinant factors for the future promotion of voluntary agreements in developing countries.

1.3 Research objectives and research questions

Sustainable development of a society is a vision. How can it become also a guiding principle in the design of business strategies and policies? Somehow we need to give practical meaning to this vision.

It seems that change (bring innovation into) the societal system requires, among other things, to engage a certain number of business activities that, later on, can be the critical mass influencing and disseminating changing attitudes to other parts of the system. The author thinks that there is an important link between innovation and the promotion of sustainable development and the understanding of this link can help policy makers to design policy instruments, including voluntary agreement, that enhance innovation into the system.

This research has two objectives. The first and core research objective is to look at a contextual reality, the Province of Western Cape in South Africa, and explore how to promote the practice that builds a coherent set of motivations for a voluntary environmental agreement on energy efficiency. The idea is that this exercise of assessing the conditions and understanding the potentials can be useful at two levels. Firstly it provides useful information from the context to prepare a discussion on voluntary agreements. These information, since are collected from a group of relevant stakeholders, help the possible promoters to frame the voluntary agreement as a multi stakeholder process and envision it. Secondly by conducting the research as a party interested in the promotion of the agreement, it was possible to explore what I called the motor, the set of conditions that can make this process start. The process to collect empirical evidence gives the author insights on how to facilitate trust between the government and the business community, develop multi-stakeholders governance and a supportive environment for innovative solutions and technologies for environmental protection. The result of the analysis is used to see if there are the pre-conditions of feasibility, the competences, and whether there are the intentions of the main stakeholders to devote resources to the negotiation process.

The second research objective aims to contribute to the latent debate on the role of voluntary agreements, in addressing environment and development problems in developing countries, with some reflections on how to wide their use and their effects. Voluntary approaches are clearly not the only means of addressing environmental problems, and surely not the main political solution adopted in developing countries but they represent an opportunity for the private and public sector to work on common goals. The research adopts a positive view on voluntary agreements and discuss how and to what extent voluntary agreements can provide an opportunity for the creation of a critical mass, in the specific context of developing countries, for the promotion of sustainable development. The second objective serves to individualize the determinants to create larger opportunities for developing countries to adopt political approaches like voluntary agreements that look beyond the existing set of observed harms, established technologies and known policy options.

In the conclusions, the data collected will be discussed according to the finding of the analysis, opinions of the researcher and experts. Some general considerations regarding the use of voluntary agreements in developing countries will be drought, building on the experience in South Africa, and especially in the Province of Cape Town. Finally the potential application of research findings will be described to propose further investigations.

The research questions related to the main object are:

- What preconditions for a voluntary agreement on energy efficiency are found in The Province Western Cape, South Africa?

- How can the set of conditions that facilitate the promotion of voluntary agreements on energy efficiency in the Province of Western Cape be created?

The research question related to the second objective is:

- Which are the determinants that can influence the future use of voluntary agreements in developing countries?

1.4 Methodology

In order to address the research questions both primary and secondary qualitative data were used. The data were gathered mainly through literature review, interviews and document analysis.

The methodological approach to address the core research problem can be described as an exploratory approach. It is exploratory in the sense that it applies a model conceived for a comparative analysis of a group of voluntary agreements in Europe to the context of developing countries. The information resulted from the analytical model are then integrated with a stakeholder analysis.

The theoretical framework has been developed based on the existing literature, especially on comparative analysis of voluntary agreements. While different theory approaches have been explored to analyze the processes and the results of these initiatives, including a **policy process approach** that looks at the interactions among the parties during the negotiation process, a traditional **economic approach** that explores the point of view of the single actor and his rational behavior, and a more innovative **knowledge based approach** that looks at the dynamics of the process and at the system of motivations; this research however has limited its investigation to the analysis of the pre-conditions for the development of an agreement on energy efficiency in South Africa. Therefore it was possible to consider only same aspects of these approaches like the revelation of existing relationships among parties, the perceived power relations and the system of motivations.[27]

The primary problem of evaluation of voluntary agreements is the development of an adequate system of criteria. The theoretical assessment of the performance of a voluntary agreement has been successfully investigated by the research project NEAPOL and their work

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[27] M. De Clercq, A. Suck. (2002) Theoretical reflections on the proliferation of negotiated agreements in *M.De Clerq. (2002). Negotiating Environmental Agreements in Europe. p. 13-*

has been used to large extent to develop the analytic framework for this thesis that is presented below.

The performance of voluntary agreements can be seen as the result of the interaction among three different aspects:

1. External preconditions
2. Internal preconditions
3. Measured performance

The **external preconditions** are defined by the socio-economic context. Four categories are investigated to see how they affect the performance of the agreement, alone and combined: the policy tradition, the existence of an alternative legal instrument, the sector structure, the market characteristics and the consumer pressure.

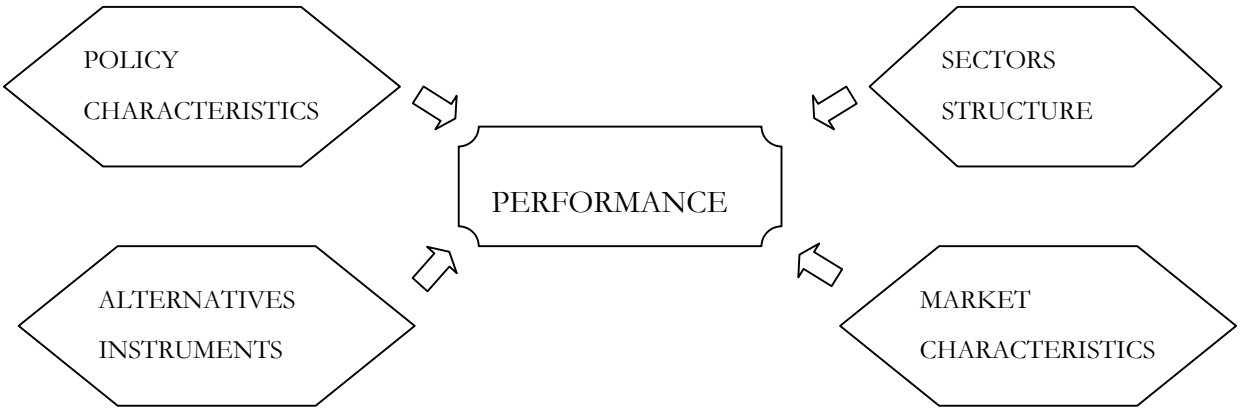

Figure 1-1 The performance of the voluntary agreements and the socio-economic context

The role of the **political tradition** is important since environmental policy evolves in a tradition and in a climate of consensus seeking, joint problem solving, mutual respect and trust. The leadership style of representative bodies is of crucial importance in the negotiation process. Lack of political commitment and limited tradition in joint policy making may reduce the trust level among stakeholders. The actual degree of NGOs´ involvement in the formulation of governmental policies and debates might indicate whether or not to include them in the negotiations. An existing long term national environmental strategy with established targets might increase the success of the voluntary agreement. The administrative capacity of the public authorities promoting the agreement have to be fostered otherwise the lack of human, financial and knowledge resources will lead to an inefficient communication strategy, poor transparency and limited achievements.

The existence of an **alternative legal instrument** could be another crucial factor for the performance of voluntary agreements; it is like a stick behind the door that will deal with the environmental problems in the case the negotiated agreement fails. There are two caveats beside the role of legislative threat and its influence on social optimal welfare solution to be considered. The first one occurs when alternative policy instruments are in the hands of other institutions and the regulator has the incentives to sign the agreement even if it is socially

damaging. The second happens when regulation is perceived as inevitable, then the motivation to sign a voluntary agreement becomes weak. Consistency with existing regulation must be achieved. Where the government or the public authorities in charge of the negotiation process have no constitutional right to draw legally binding voluntary agreements, self commitments or self declaration with no legal implications are used.

The other conditions to pay attention of are the **structure of the sector or sectors**, depending whether the agreement is a sectoral one or a thematic one proposed to more than one sectors. The fact that the industry sector involved is homogeneous, has a small number of players and is dominated by one or two players, or has a powerful industry association that can speak for all members, could be an important factor for the performance of voluntary agreement. When a sector is broad and not homogeneous in nature, a strong industry association or a supply chain with a strong pro active actor who can influence suppliers will increase the likelihood of an agreement.

Finally there is the role of the **market characteristics**, **consumer pressure and competition**. The fact that a firm can gain competitive advantages by cooperating in the negotiation (due to increased visibility) and by compliance with a negotiated agreement (due to better reputation), could be a crucial positive factor for the performance of a voluntary agreement. Two main drivers can be deduced, consumers or public pressure and high competition in the market that push companies to further differentiate themselves. A group of benefits that can derived from voluntary initiatives are called non-regulatory gains and have been considered extremely important in the context of developing countries as motivational factors to engage the business community. However, other circumstance can trigger the effectiveness of the agreement, for example the lack of awareness and education on environmentally related problems, difficult access to environmental information for the public, scarce cooperation of media and lack of independent bodies for evaluation and verification of the voluntary initiatives.

The **internal preconditions** are defined by the specification of the agreement in term of its consistency with the underlying policy objectives, and its compatibility with the national policy objectives and the international rules on trade and competition. The specification of an agreement can be assessed under three separate sub-dimensions:

<u>Environmental performance:</u>

How is the environmental target or the implementation defined?

What mechanism will be used to achieve it?

Is there an adequate control system?

<u>Learning:</u>

What is the learning objective?

How will this objective be realized?

Is there an adequate co-ordination system?

<u>Economic efficiency:</u>

How will the burden-sharing be achieved?

How will free-riding be dealt with?

How are any competitive distortions addressed?

Are the benefits delivered by the agreement cost-effective?

The potential for learning is a feature that distinguishes negotiated agreements from the other policy instruments. If learning is a prerequisite for improved environmental performance, then learning may also provide the improvement of cost-efficiency through the reduction of information asymmetries.

The last aspect is the **measured performance**. It can be assessed through three sub dimensions: application of the agreement, impact of the agreement and resource development.

The application of the agreement refers to the compliance of the parties with the respect to the targets and obligations (such as reporting, monitoring, competitions rues) specified in the agreement. The target level can influence the environment, while the obligation can affect the cost-effectiveness and the resource base of the negotiation process.

The second dimension, impact, does not only concern the environmental effectiveness of the agreement but it incorporates the economic impacts of the performance in term of cost-efficiency and competition:

- Environmental impact

  Is there an improvement over the business as usual scenario?

- Cost-efficiency

  Are the private costs low and efficiently shared?

  Are the administration costs low?

- Competition

How is the free-riding being dealt with?

It has to be noted that the impact on these three elements depends also on the way they have been included in the specification of the agreement.

Finally, the **resource development** refers to the improvements in the policy resource base, resulting from the negotiations in term of built relationship between the policy makers and the private actors. The achievements in shared responsibility and in shared uncertainties will falls under the category of resource development even if they might be difficult to assess. The existence of a negotiated agreement can lead to more productive relationships, also in term of product or process innovation. Innovation-oriented agreements often include the setting up of a technology pass-through, the commitment to work together to stimulate innovation or devolve resource for research and development activities. The picture that can be drawn by all the three dimensions, external preconditions, internal preconditions and measured performance together, is shown in the figure below.

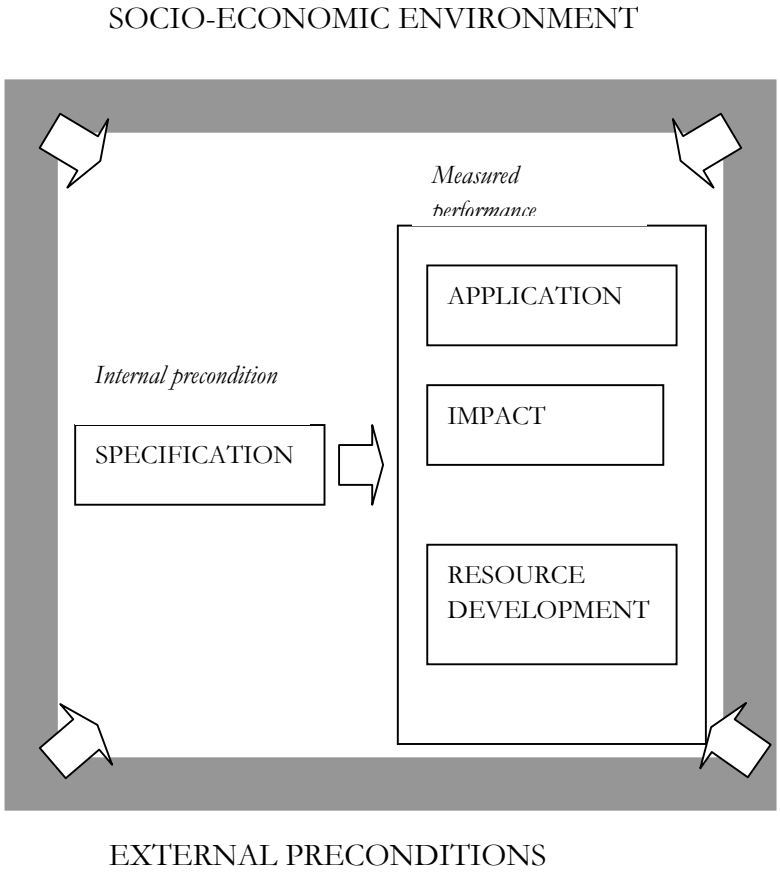

Figure 1-2 The influence of the socio-economic context on the performance of the agreement

Source: M.De Clercq, 2002

The research assesses the external preconditions of the agreement, giving a snap shot of the political tradition in relation to environmental policies or other intervention policies in respect of developing partnerships. The understanding of the decision making process in the area of energy policies is important to assess the potential to use voluntary agreements and regulatory or market measures. Regarding this point, the research looks at some major cost and benefits to evaluate the economic efficiency of the different alternatives. The structures of energy supply and demand as well as the market characteristic of the commodity are discussed with NGOs' members, government members and academics. The structure of the industry sector and the market characteristics of that sector are also discussed referring to members of the industries, and that might lack of an external point of view. It was difficult during the time allocated to the research to discuss the business conditions of the production, especially in term of competition and consumers pressure due to a little involvement of the NGOs and government members in the business reality and the limited number of firms that was possible to visit and explore. The internal precondition and the measured performance cannot be

assessed until the agreement came in place; the interviews with the stakeholders however reveal the expectation of the parties in term of impacts and performance.

As mentioned before in the case of an ex-ante assessment, the analysis of the institutional, political and economic and cultural context might not be enough to recognize the systems of motivations, barriers and drivers and make them fuller and better coordinated. Another typology of analysis that involves the stakeholders therefore is conducted to further explore the system.

The policy goal contained in the agreement can be seen as the response to a problem. Then it is important to start with the analysis of the problem and the resource that the stakeholders are willing to spend for the solution of the problem. The following aspects are investigated:

- Objective and resources of the actors
- Interaction between the actors (the structure and the character of interaction)
- Role of the actors (individual and collective)

The interactions between the actors play a major role in a public policy-oriented approach. The need to solve a collective problem leads to collective interaction between different stakeholders. Normally, these interactions result in the creation of a network. The network is characterized by a specific pattern of interactions like confrontation (due to concentration of resources), bargaining, problem solving (due to broader distribution of resources) and strategies to influence the decision-making process.[28]

Collective problems > Collective interaction > Network

Even if the pattern of interaction within a policy network can change during a decision making process, is interesting to ask the main stakeholders what kind of interaction they foresee for a successful development of the negotiation. Since voluntary agreement is a consensus-oriented policy tool, the definition of the objective takes place within a context of complex dependency relations between different actors. The stakeholder analysis will try to identify the stakeholders' relations, their interests and powers. This can helps in constructing committees, working groups and consultation processes. As a continuous process, a voluntary agreement should bring in those roles that matter but might otherwise not have come forward. Every stakeholder has a multiple role to be given space, as individual, as citizens, as consumers, as leader, as manager, etc. The boundaries between people's role are blurring. It has been shown that people expect governments to provide services as the private sector does, and they change their business choices in line with their political opinions. The capability of the government to influence business, community or individual activities is limited with traditional

[28] M.De Clercq. (2002). *Negotiating Environmental Agreements in Europe*. Edward Elgar, UK. p. 64-

policy tools. Moreover in South Africa, as well as in other developing countries, there are other pressing issues on the agenda. Within this context how is it still possible to create stable private public partnerships for a better quality of the environment? Do we see a real demand for a better quality of the environment?

The stakeholder analysis has been conducted using semi-structured interviews. Twenty actors were interviewed among public servants or politicians, members of the industries (retailers, manufacturing plants and third sector), academics, researchers and NGOs' members. The stakeholders have been asked to have personal interviews to give them more assistance in the understanding of the topic of the research. The interviews were semi-structure in order to gather as much qualitative data as possible. A questionnaire was designed before starting the interview to cover the same theme and assure consistency. A copy is provided in the appendix.

Qualitative research presents numerous methodological challenges including validity, representation and value. In an effort to validate information, the qualitative methods used included document analysis (company reports and policies, newspaper magazine, research bulletins, legal texts) and stakeholder interviews.

1.5 Scope and limitations

The research is limited in scope and in breath to the analysis of a certain number of stakeholders. The interviews have been conducted in a short period of time, and in only few occasions there was the opportunity to meet the stakeholders in more occasions or conduct multiple interviews in the same organization. The interviews tended to vary in the degree of structure from spontaneous discussion to a set of more specific questions reported in the questionnaire, available in the appendix. Due to lack of time for the fully understanding of the complex landscape of the industry sectors in the Province of Cape, a number of criteria are proposed for the selection of the ones to be approached initially. The visibility of the sector, especially if the thematic Environment Management Cooperation Agreement (EMCA) on energy efficiency aims to be a pilot one that will later one engage a broader number of parties. The fact that the sector has been involved in a Black Empowerment Employment Charter, either when the government implemented it or when the sector voluntary committed to have one. These charters imply that the companies within a sector have to employ black people or outsource at least 25% of the job positions to black people. This measure brings within the sector the social issue of equal opportunities and it shows the commitment of the firms to the poverty eradication. Electricity and electrification has always been a social issue after the democracy took place in 1994. A lot of projects have been successful and the electrification of the countries has passed from 30% of the population to 70% in ten years. A commitment to energy efficiency might be important for sector with a Black Empowerment Employment Charter. The third criteria is the involvement of the majority of the companies in environmental management system (like ISO 14001) or sustainability report or innovation management. Following these criteria and combined them, seven industry managers and five environmental consultants have been contacted. Not all the contacted persons have agreed to be interviewed or have fully answered the questionnaire. The research has tried to limit the analysis to a certain number of stakeholders, however the possibility to foster a cross-sector partnership on energy efficiency has been considered.

Regarding the analysis of the economic and social context, the analysis has been limited by the difficult in access information and a lack of data, especially regarding the electricity supply and demand market for the next ten years. The commodity is regulated by a national regulator and is still a state monopoly de facto. Moreover the sales of electricity provide about the 30% of the income of the City of Cape Town. So then the information related to the coming energy

policies are released by different bodies, and are not always accurate in the sense that they might contradict each others.

Another major limitation of the research derives from the fact that there is little literature available on voluntary agreements in developing countries. The agreements negotiated in Latin and Central American countries, Asia and the attempts in Africa are published in the national language or languages of the country; often the only thing available in English is a summary of the initiatives on the website of one of the associations involved or of an international institutions like the World Bank, WTO, FAO or UNEP that has supported the initiative. There is a lack of scientific papers, empirical studies, ex-post analysis and evaluations. This makes difficult to compare the different agreements, understand the determinants factors and realize common characteristics and barriers. Mapping the use of voluntary agreements in developing countries is a difficult task, most of the agreements have been developed lately compared to developed countries and the majority hasn't been finalized yet. The information related to these initiatives is also dispersed among a number of actors.

Finally the author is aware that the conceptual framework has affected the research and the interviewee's perceptions are a potential source of bias in the findings. However, the author before conducting the interviews has tried to become aware of the knowledge that might affect the research.

2 Voluntary environmental agreements and developing countries. A literature review

2.1 Voluntary agreements as tools for cooperative governance in the area of environmental protection and sustainable development

The influence that regulation and voluntary initiatives might have on the technological, organizational and strategic behaviors of companies needs to be assessed and understood by both the private and the public sectors. The understanding of industrial environmental regulation has been pursued in depth by the book Regulatory Realities.[29]. The authors, Andrew Gouldson and Joseph Murphy, have studied the relationship between the macro-economic development and the environmental protection of the European Union and they analyzed the role that policy might play in changing this relationship. The type of policy that might affect the relationship between the macro level and environmental protection is a policy that promotes structural change at the macro-level, seeking to establish the path for sustainable development. Although not fully and widely accepted, this kind of policy is often associated to the theory of ecological modernization. The name suggests that economic and environmental goals can be integrated within a framework of industry modernity. This theory assigns at the same time a central role to the intervention, innovation and diffusion of technologies and techniques at micro-economic level.[30] Voluntary approaches are proposed in this research as a viable policy tool that can affect the macro level and brings the issue of environmentally sound industrial practices down to the decision making table, asking the parties to practically implement measures and at the same time allowing them to have long run benefits and flexibility. Moreover, they might be able to bring innovation and diffusion of best available technologies at micro-level.

The shift from retroactive to pro-active approaches implies that the costs and the benefits associated are unevenly distributed between actors over time. It imposes definite transition costs on a concentrated group of actors in the short and medium term. So why have so many companies invested efforts in environmental management and agreed to commit themselves voluntary to certain targets? The answer to this question is not easy to elaborate and might be not unique. Let me however try to define some main drivers, because they are the same drivers that can motivate a company to enter a voluntary agreement. Some of the regulative measures are not efficient and they have forced industries to inadequate compliance investments. A major argument that since industry has a limited influence over the content and form of regulation; often the result is unnecessary high compliance costs. Industries have also experiences of direct consumer reaction to the performance of their plants, even when in compliance with environmental regulation. This might also result in difficulties in securing authorizations for new plants and processes because of public and local community concern or opposition. The environmental impact assessment industries that is demanded from industries for every new production plant or extension (also in a number of developing countries, including South Africa) involves a public disclosure of information related to the social and environmental impacts and a consultation process. These various circumstances are the main drivers that have motivated the companies to modify their behaviors in response to the wider social demand, adopting two main strategies:

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[29] A. Gouldson , J. Murphy. (1998). *Regulatory Realities. The Implementation and Impact of Industrial Environmental Regulation.*. Earthscan, London. Preface

[30] A. Gouldson , J. Murphy. (1998). *Regulatory Realities. The Implementation and Impact of Industrial Environmental Regulation.*. Earthscan, London. p. 2-

1. influencing public opinion

2. be involved in the development of public policies

Let me focus on the second strategy, which aims at anticipating new regulation, adopting practice and innovation strategies that will place the company ahead of evolving regulation.[31] Voluntary agreements can be used by companies to enter a public policy decision making process as well as for influencing public opinion. Anticipation of regulation has been considered the most important driver influencing corporate environment-related decisions by author like Lévêque. [32]Regulatory pressure is extremely important for most of the companies, and of particular relevance for many high-impact industries such as metals, chemicals and paper.[33] A voluntary agreement can be considered as a governance tool in the sense that it offers an arena for the different stakeholders to discuss and address new policies, especially in the area of sustainable development and environmental protection. Environment, however, presents both opportunities and problems for industries. The only way to engage the business sectors in a voluntary initiative seems to be to propose them so called win-win situations. What does it then really mean to enhance resource productivity and economic competitiveness at the same time? When the Dutch environmental protection agency NOVEM proposes the Long Term Agreements on energy efficiency (LTA), they wanted the Dutch industries to become not only the most energy efficiency companies but also the most competitive companies.[34] The EPA has benchmarked their performance against the ten most efficient companies in the world. Moreover, under what conditions is a voluntary agreement a win-win situation for the government? How can the government promote more than the business as usual scenario, and stimulate the implementation of those measures and process investments that yield both economic and environmental benefits? Some authors argue that in order to be effective voluntary agreements require the presence of sticks and carrots, of attractive incentives and strong commitment targets.

Negotiation processes, especially in the form of mediation have become an important element of environmental regulation in a lot of countries. Environmental negotiation ranges from policy development via standard setting and other forms of rule making, to permitting and enforcement. There are examples of voluntary environmental agreements between local communities and private companies, they can be considered as a segment of the whole spectrum of environmental contracting. Irrespectively of their content, environmental agreements between polluting companies and local communities have one main purpose, namely to overcome acceptance conflict between a state agency, an author of an infrastructure project or an operator of a private facility on the one hand, and local communities that may be represented by municipalities or selected or self-appointed representatives, on the other. From this perspective, the phenomenon of voluntary environmental agreements reflects, and responds to, the crisis of traditional participation as a mean of securing acceptance of potentially adversely affected parties. The modality to create these partnerships includes the formal procedural entanglement, the representation of parties' interest and values, the supply

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[31] R. Howes, J.Skea, B. Whelan. (1997). *Clean & Competitive? Motivating environmental performance in industry.* Earthscan, London. p. 2-

[32] F. Lévêque. (1996). *Environmental Policy in Europe: Industry, Competition and the Policy Process.* Edward Elgar, Cheltenham p. 23-

[33] R. Howes, J.Skea, B. Whelan. (1997). *Clean & Competitive? Motivating environmental performance in industry.* Earthscan, London. p. 14

[34] M.G. Rietbergen, J.C.M. Farla, K. Blok. (2002). Does agreements enhance energy efficiency improvements? Analyzing the actual outcome of long term of industrial energy efficiency improvement in The Netherlands. *Journal of Cleaner Producion* N° 10 p.153-

of information that support their interests and values, as well as the substantive consideration of these interests in the decision making process. Arguably, negotiation leads to broader information input, participation that accompanies the whole process, removal of asymmetries of influence and favor cooperative problem solving behaviors.[35] In countries where the administrative process is highly adverse or highly bureaucratic, negotiation might be difficult. Different incentives and disincentives for environmental contracting can be observed. Consideration, such as the ability of the negotiating parties to secure a judicial review, their access to information, publicity and public pressure seems necessary, or at least supportive conditions, for contractual arrangements because they diminish unequal bargaining positions. Data availability is of crucial importance too. When members of local communities or their representatives are not granted equal access to environmental data by the operator or the agency or are not able to compensate for this deficit in some way, the chance that negotiations are open at all, or a least that a balanced result is achieved, are smaller. From the point of view of the plant operator, an important incentive to negotiate is that through environmental negotiations a long lasting relationship between the parties is often created, on which parties can rely on in later conflicts.[36] Theoretically contractual techniques involve the danger of narrowing of the consideration of affected interests. Since it is not easy to represent a multitude of different, often very diffuse interests in negotiations, management consideration may lead to an exclusion of certain interests. By limiting the number of negotiating parties, the whole affected interests may not be covered and a decision taken in favor of interests that are present, manifest, and easy to organize might be opposed by the civil society. For this reason some of the negotiation processes have involved third parties like NGOs, universities and experts. The merits of this argument are not easy to assess. Environmental agreements supposedly lead to an improvement of the situation of adversely affected parties compared to that which the administration and courts could have achieved in the framework of the regulation and their legal powers. When polluting companies enter the negotiation, an unbalanced result is possible at the expense of non-represented interests (including future generations). However the solution might be superior and more far achieving than the one that would exist without negotiations. The dynamic of a negotiation process and the entanglement in the negotiations always pose the risk that participants may seek quick agreement, be cheated by another party or by free-riders, underestimate the disadvantages of the bargain, or choose lowest common denominator solutions.

2.2 Environmental protection in developing countries

In the last decade, environmental management as a concern for corporations has come along way in Europe, North America, Australia and Japan: evolving quickly from being a matter of mere legislative control on a few and specific concerns, such as noise, effluent, air emission and waste disposal, to being seen currently as a set of complex issues that permeate all business activities, up and down the value chain. Moreover, the role of environmental management has shifted, to some extent, from a "hygienic factor" (issues that need to be addressed but which do not contribute to organizational success) to a "motivation factor" (issues that add value to the company, improve the economic and social standing of the organization, help motivate and retain employees, and improve the corporate image, all of which are necessary elements for the competitiveness of firms). The situation in developing

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[35] E. Rehbinder. (1994). Ecological Contracts: Agreements between polluters and local communities. *In G. Teubner, L. Farmer, D. Murphy. Environmental law and Ecological Responsibility. The concept and practice of ecological self-organization.* Wiley & Sons, Chichester, New York, Bribane, Toronto, Singapore. p. 158-

[36] E. Rehbinder. (1994). Ecological Contracts: Agreements between polluters and local communities *in G. Teubner, L. Farmer, D. Murphy. Environmental law and Ecological Responsibility. The concept and practice of ecological self-organization.* Wiley & Sons, Chichester, New York, Bribane, Toronto, Singapore. p. 161-

countries is somewhat different. The vast number of companies, operating in the developing world, have so far not adequately reduced their impacts on the environment and their activities are affecting the lives of the people living in the South. Regrettably, badly written or ill-enforced environmental legislation have littered the landscape of environmental interventions in the developing world, which makes proper control and accountability of resource use difficult at best, impossible at worst.[37] For instance, Mulugetta wrote that Peru has more than 6,500 individual items of environmental legislation, with different laws and standards for different economic sectors, regions, products and manufacturing techniques, and it is estimated that about a third of these are redundant, with another third probably outdated, obsolete or contradictory to other laws.[38] Poverty and environmental degradation are closely linked and mutually reinforcing. It is important to stress that the life of poor people depend mostly on the natural resources of their surrounding environment. The economy of developing countries is often also heavily based on the exports of natural resources.

The challenge should therefore be how to mobilize the same actors who "contributes" to local environmental degradation to become the custodians of the environment and its regeneration. In these efforts, the first area that calls for attention is enhancing the level of awareness regarding the environment and outlining the opportunities and advantages gained from its preservation. However, the level of environmental awareness and consumer power in the developing world is far from satisfactory. Since there are enormous differences in consumption patterns and access to resources between people in the North and in the South, there are inevitably going to be differences in the strategies adopted. This is most evident in the way industrialized and developing countries approach the concept of sustainable development and how the concept itself finds meaning and significance for the respective societies.[39] For example a group of NGOs has launched an emotionally charged debate on the activities of multinationals in the developing world[40] addressing four main themes: the responsibility for sustainable development, the repositories of power for sustainable development, the representation for sustainable development and the re-organization for sustainable development. The first theme is related to the fact that the decision of investing in a developing country involves social responsibilities. The second theme discusses which agents have the power to advance sustainable development in developing counties. Members of NGOs complain that the national government often does not represent the interests of the local communities. This is particularly the case in those countries with non-democratic regimes and excluded minorities. More profoundly, some representatives of NGOs argue that given the dependence of local economies on multinational' investments and more in general on the international financial market, national governments do not retain the power to enforce sustainable business practices. The third theme is related to the necessity of representation of the communities affected by industrial practices either by the government (when possible) or by local and international NGOs. The fourth theme introduces the acknowledgement that a number of organizational constraints hinder the responsiveness to sustainable development, including the dynamic mother-sister companies that create a hierarchy in the decision-making process, the short term financial targets that don't motivate the companies to reduce the

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[37] W. Wehrmeyer, Y. Mulugetta. (1999). *Growing pains. Environmental management in developing countries*. Greenleaf Publishing, UK. Introduction

[38] W. Wehrmeyer, Y. Mulugetta. (1999). *Growing pains. Environmental management in developing countries*. Greenleaf Publishing, UK. Introduction

[39] W. Wehrmeyer, Y. Mulugetta. (1999). *Growing pains. Environmental management in developing countries*. Greenleaf Publishing, UK. Introduction

[40] For further discussion see T. Moser, D. Miller. (1999). Multinational Corporations' impacts on the environment and communities in the Developing World. A synthesis of the contemporary debate. p.233- in W. Wehrmeyer, Y. Mulugetta. (1999). *Growing pains. Environmental management in developing countries. Greenleaf Publishing, UK.*

environmental impacts, the lack of overall understanding of the motivational factors that are required, etc. NGOs are seeking to apply informal pressure on corporate and regulator behaviors[41].

Two main considerations can be drawn from this section. The fact that in the context of a developing country it is important to involve NGOs in the early beginning of a decision making process in order to assure their support and have a broader sphere of interests represented. The second is that both the government and the industries have responsibilities in promoting a healthy and sustainable development, and that it might be better, when feasible, to coordinate the efforts and gain visibility.

2.3 Lessons for voluntary agreements in developing countries

The paragraph regards the future usage of voluntary agreements in developing countries. When this research started, the author thought that there were a consistent number of voluntary environmental agreements adopted by developing countries. After three months of research was clear that these agreements are really few. The original title of the paragraphs has been change from "Lessons from voluntary agreements in developing countries" to the actual "Lessons for voluntary agreements in developing countries".

A brief introduction of the literature reviewed regarding these agreements is presented in order to facilitate the comprehension of the phenomena and further investigations.[42]

Some voluntary agreements have been created to address a specific and urgent problem. This is the case for the National agreement on the control of benzene in Brazil, and the Costa Rican agreement on the level of contamination of rivers of the coffee processing industry.

- The Brazilian agreement was promoted in 1995 by representative of industries, trade union associations and government and it creates technological reference values for three sectors (Chemical Industries, Steel and Iron Manufacturing Industries and Petrochemical Industries) and specific sector guidelines for the evaluation and monitoring procedures. A national register to track the use of benzene was instituted.[43]

- The Costa Rican coffee agreement was signed in 1992 by three government authorities and the Costa Rican Coffee Institute that represents the coffee processing industry. The agreement established quantifiable targets and time frames that the industries had to comply with in order to obtain the environmental permits related to the use and the contamination of water.[44]

Mexico and South Africa has developed a legal framework with formal provision for using voluntary environmental agreements.

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[41] M. . Perry, S. Singh (2002). Corporate Environmental responsibility in Singapore and Malaysia. The Potential and limits of Voluntary Initiatives in *P. Utting. (2002). The greening of Business in Developing Countries. Zed Book, London p.98*

[42] The list is no surely exhaustive due to the preliminary nature of this study, it wants however to contribute to the activity of map voluntary environmental agreements in developing countries.

[43] N. Freitas, W. Gereluk. (2002). A national tripartite agreement on benzene in Brazil in P. ten Brink. (2002). *Voluntary Agreements. Process, Practice and Future Used.* Greenleaf. UK p. 176-189

[44] J. Hanks. (2002). A Role for Negotiated Environmental Agreements in Developing Countries in P. ten Brink. (2002). *Voluntary Agreements. Process, Practice and Future Used.* Greenleaf. Uk p. 166-167

- Ten sectoral environmental agreements has been signed in Mexico.[45]

- The Guadalajara agreement in Mexico was promoted by the World Bank in 1996, the Ministry of Environment, Natural Resources and Fisheries and eleven large Mexican and Multinational companies with production plants based in the Region. They have agreed to promote environmental management systems in small and medium enterprises (SMEs). Using a tutoring scheme the companies signatories provided technical support for two years to SMEs in the Guadalajara area.[46]

- South African experience with Environmental Management Agreements (EMCAs) is presented in the following chapters.

Other agreements have been use to create rating schemes and a "name and shame policy". These initiatives relay largely on public opinion and consumers pressure. This is the case of the Costa Rican certification on sustainable tourism and the Indonesian PROPER initiative.

- The Costa Rican certification for sustainable tourism was created in 1997 by the Ministry of Tourism and the Hospitality industry association. It was designed in partnership with leading academic institutions, the major trade association, environmental organizations and hotel managers. Interestingly the representatives of these groups created a National Accreditation Commissions that established the rating system and supervise the certification processes. The initiative has been adopted by the World Tourism Organization (WTO).[47]

- The Indonesian PROPER initiative was established by the government in order to give visibility and reward to environmentally certified companies. The government provided incentives in the form of soft loans for purchasing pollution control equipments. The initiative established also an environmental management system rating scheme.[48]

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[45] INE (Instituto Nacional de Ecologia, Mexico). (2000) Elementos para un proceso inductivo de gestión ambiental de la industria. Chapter 2, El Programa Voluntario de Géstione Ambiental (PVG). Available on line at http://www.ine.gob.mx/ueajei/publicaciones [14 September 2004]

[46] J.Hanks. (2002). A Role for Negotiated Environmental Agreements in Developing Countries in P. ten Brink. (2002). *Voluntary Agreements. Process, Practice and Future Used.* Greenleaf. Uk p.165-166

INE (Instituto Nacional de Ecologia, Mexico). (2000) Elementos para un proceso inductivo de gestión ambiental de la industria. Chapter 2, El Programa Voluntario de Géstione Ambiental (PVG). Available on line at http://www.ine.gob.mx/ueajei/publicaciones [14 September 2004]

World Bank. (1998). Mexico: The Guadalajara Environmental Management Pilot. Washington, Dc.

[47] J. Rivera. (2002). [Journal] Assessing a voluntary environmental initiatives in the developing world: The Costa Rican Certification for Sustainable Tourism. *Political Science.* Vol 35.p. 333-60

INCAE. (2000). Tourism in Costa Rica: A competitive challenge. Costa Rica

[48] H. Hettinge, M. Huq, S. Pargal and D. Wheeler. (1996). [Journal] Determinants of pollution abatement in Developing countries: Evidence from South and Southeast Asia. *World Development* Vol. 24 N 12 p.1894-

And finally some countries have adopted voluntary agreements for promote cleaner production projects. This is the case of the Colombian and Chilean Framework agreement on cleaner production and the following sectoral agreements.[49]

The experience of South African and evidence from the literature review are used in this paragraph to discuss determinants factors for the promotion of future use of voluntary agreements in developing countries.

It has been argued[50] that the existing regulatory frameworks in developing countries are not producing the desired results in the protection of the natural and urban environment; partly because some environmental standards (emissions standards, ambient standard and best available technology standards) have not been developed yet and partly for the difficulties encountered to disseminate and practically enforce the existing regulations (not clear regulation, limited institutional capacity, lack of appropriate equipment and trained personnel). It is evident that the current lack of ability to enforce existing regulations required government's institutional capacity to be built up. And this means, in a lot of countries a long time to go. If anything however, this should serve as incentive to explore other options that at the same time can help to diffuse regulatory and enforcement capacity and improved environmental behaviors. Barber argues that the significance of voluntary environmental agreements and the review of them might not be apparent at first glance. Nevertheless the fact that they are "voluntary" might mislead the public to consider them of secondary importance for the development of an effective regulatory framework for the protection of the environment in developing countries.[51] Looking deeper, the topic of voluntary agreements is part of the broad debate regarding corporate responsibility and accountability and the role of the business sector, the government and civil society in promoting sustainable development. This debate has involved think tanks, policy makers, sociologists, economist, etc since the UN Summit in Rio in 1992.[52]

The contemporary debate on voluntary environmental agreements in developing countries suffers of a dilemma regarding the effects that this tool might provoke on the establishment of new environmental regulation. The dilemma regards their anticipating or delaying effect. Given a certain amount of human and financial resources thought the state budget for the protection of the environment, some authors argue that devoting certain resources to the process of a negotiated agreement one subtracts them to the effort to create a more certain regulatory environment. Others instead consider that the regulator is often in a situation of impasse regarding the implementation of certain standards and they favor the opportunity to use voluntary agreements to promote a better environment performance that anticipate the new regulation through a system of self discipline (self monitoring and reporting reviewed by a third and independent party).

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[49] UNEP. *Acuerdos de producción limpia in Chile*. Available on-line at http:// www.uneptie.org/pc/cp/reportspdf/ [12 July 2004]

J. Hanks. (2002). A Role for Negotiated Environmental Agreements in Developing Countries in P. Ten Brink. (2002). *Voluntary Agreements. Process, Practice and Future Used. p.163-*

[50] J. Hanks. (1998). [Journal] Sharing responsibility: co-regulatory policy instruments as a means of achieving industrial sustainable development in South Africa and other developing countries. *Industry and Environment* .Vol. 21 p.36

[51] R.B. Gibson. (2000). Encouraging voluntary initiatives for corporate greening. Some considerations for more systematic design of supporting framework at national and global level. Paper presented at the UNEP Voluntary Initiatives Workshop. September 2000. Paris.

[52] J. Barber. (1998). [Journal] Can corporate be trusted? Towards a multi-stakeholders review of voluntary initiatives. *Northen Lights* p.55-60

Nevertheless from this perspective it emerges a function of voluntary environmental agreements that is the opportunity to formalize a high level of dialogue and trust between industry and the regulator while maintaining political independence[53]. It is clear that the role of governments as promoters of voluntary initiatives is fundamental but it has not been enough so far. Other actors can and should become promoters of these co-regulative processes. It becomes even more clear learning about the research of Hettige, Huq, Pargal and Wheeler[54] regarding the phenomena of informal regulation in Asia. These authors explore the determinants of pollution abatement in four Asiatic countries and they realized that despite weak or non existing formal regulation, there were many clean industrial facilities. Among the causes the process of privatization and innovation of some public enterprises, the rapidly spreading of multinationals facilities relatively clean, the income increase and the technology turnover. These results suggest that there is an informal[55] regulatory capacity within the business sector; and it has been dramatically enhanced by the diffusion of practices of environmental management systems and environmental reporting. This capacity needs recognition and an effort of dissemination and diffusion of best practices. NGOs and the organized civil society in general can play in this regard a fundamental role of promoters. Non-governmental actors like Industry Associations, Chambers of Commerce, Trade Unions, Environmental NGOs, Professional Associations, Intergovernmental Organizations and Independent Standard Associations have already sponsored voluntary initiatives and approaches. They can become more conscious of the important catalyst effect of their sponsorship for the diffusion of voluntary agreements in developing countries.

Therefore voluntary environmental agreements could be seen as a co-regulation instruments which give recognition to this informal regulatory capacity and utilize it. Voluntary agreements de facto combine the development of co-regulatory capacity and self-enforcement capacity through the diffusion of self monitoring practices and third party reviews. There are potentials, and this research shows them, that this capacity could be use to plan and enforce long term policy targets in South Africa. And this is reasonably applicable to a lot of other countries. A fundamental step to achieve a broader diffusion is to communicate voluntary agreements to the parties and the public opinion as a mean of achieving desired environmental policy objectives. The acknowledgment of the effectiveness and credibility of voluntary agreements by possible promoters is a determinant factor. Gibson argued that all possible promoters should be mobilized and a culture of encouragement, recognition, and reward should be developed[56] to complementing the existing culture of obligation and punishment. It can be argued, however, that in some developing countries a culture of obligation and punishment has not been developed.

The commitment to enter a voluntary agreement required the self-interests of the parties (parties act following their own interests). The adequacy of motivations to act responsibly towards the environment comes from external as well internal pressures and education. Since a designed system of incentives has to effectively pressure the parties to start a negotiation

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[53] J. Hanks. (1998). [Journal] Sharing responsibility: co-regulatory policy instruments as a means of achieving industrial sustainable development in South Africa and other developing countries. *Industry and Environment* Vol. 21 p.38

[54] H. Hettinge, M. Huq, S. Pargal and D. Wheeler. (1996). [Journal] Determinants of pollution abatement in Developing countries: Evidence from South and Southeast Asia. *World Development* Vol. 24 N 12 p.1891-

[55] The term informal regulation is intended as regulation not formally emended by the government.

[56] R.B. Gibson. (2000). Encouraging voluntary initiatives for corporate greening. Some considerations for more systematic design of supporting frameworks at the a national and global levels. *Paper prepared for the UNEP Voluntary Initiatives Workshop*, 20 September, Cap 15 Conference Center, Paris. p.13

process, for policy makers it is important to gather evidence about why firms can participate voluntary to these initiatives, including:

1. the economic benefits,
2. the financial benefits,
3. the regulatory and
4. the non regulatory benefits

that voluntary agreements can provide. In order to facilitate this acknowledgment, a registry of voluntary agreements that identifies relevant drivers and learning objectives should be established and publicized among developing countries political and social leaders. A better and fuller coordination of existing drivers can positively increase the number of participating companies and reduce the problems of free-riders.

Another relevant factor is the administrative capacity to coordinate the organization of the activities of parties related to the voluntary agreement. The coordination body has to equally and impartially represent the parties, and this implies often the creation of a new body co-financed by private and public budgets. The best achievable result will probably be a body appointed by the government authorities, the industry sector and NGOs.

The creation of integrated systems of regulatory and non regulatory mechanisms is really important and it should be promoted at different level: locally, nationally and internationally.

Nur Masrpatin[57] proposed a visual representation of the interconnections between Multilateral Environmental Agreements (MEAs), National Environmental Agreements and Local Environmental Agreements.

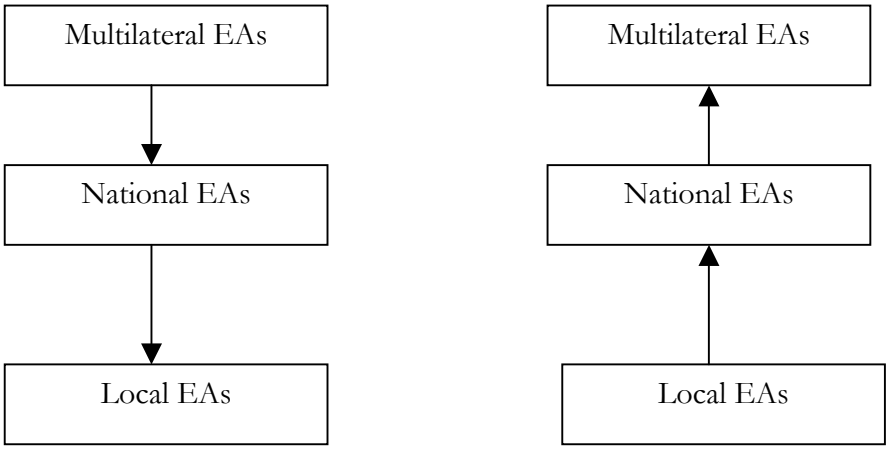

Figure 2-1 Interconnections between international, national and local environmental agreements

Source: N. Masripatin, 2002

[57] N. Masripatin. (2002). Environmental agreements as appropriate long-term measures. in P. ten Brink. (2002). *Voluntary Agreements. Process, Practice and Future Used.* Greenleaf. UK p.203-

The Kyoto protocol, for example, is creating interconnections promoting cooperative attitudes in developing countries through Clean Development Mechanism projects. These projects usually have a project development team that creates the condition for the partnerships to be created. These partnerships are between a sponsor government and a company. In this way companies start to see governments as partners and these competences can be reuse for local or national partnership with their governments. In parallel NGOs' projects involving the business sectors, can help industries to see civil society as possible partners for voluntary agreements. This kind of synergy is necessary to cope with the complexity of politics and human behaviors.

There are different philosophies about the interactions between the state and the market. The diffusion of a supportive climate for voluntary agreements relay on a greater reliance on corporations to act in the public interests, even under the control of the state and third independent parties. Different perceptions as to the motivations and intents of the business community are often a big initial obstacle for the voluntary environmental agreements. The integration of social and environmental values into policies and operations of companies, the improved environmental behaviors of individual and collective actors through a system of agreed target and self monitoring that companies more flexibility and responsibility, is a so different political approach that it generates fears regarding the risk of compromise the achievements of existing regulation more than excites people for the possibility to help companies to change their behaviors and go beyond the requirements existing regulation.

Finally a main determinant regards how to overcome the lack initiatives, willingness and ability to resolve some environmental problems in a poor enforcement regulatory environment. Action should be taken to facilitate coordination among existing voluntary environmental agreements and continuous education and research in developing countries. A special attention should be dedicated to comparative studies of existing voluntary agreements to reflect on the experience and learn for the future.

A lot of authors[58] have attempted to recognize the positive elements of voluntary initiatives, analyzing them and understanding the benefits and incentives that they can promote. Opinions differ concerning the usefulness for policy makers to rely on voluntary approaches to achieve environmental targets have collected. Guiding principle have been developed to ensure that voluntary agreements are designed in an appropriate way that enhance environmental benefits, transparency, monitoring, accountability and compliance with legal obligation both from public authorities and NGOs. The European Commission has adopted legally non binding guidelines since 1996[59]. Similarly the US EPA published a guidebook in 1995.[60] The OECD contributed in 2003 with a book called "Voluntary Approaches for Environmental Policies"[61]. Other recent publications, listed in the biography, might provide useful hints and guidance for motivate action.

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[58] D.J.E.Grimeneaud. (2004). Use of "Negotiated Environmental Agreements" in *N.J. Vig, M.G. Faure. (2004) Green Giants? Environmental Policies of the United States and the European Union. MIT press. p. 158-181*

[59] COM (96) 561 final. Communication from the Commission to the Council and the European Parliament on Environmental Agreements. November 27, 1996, OJ L 333, P.69

Council Resolution of October 7, 1997 on environmental agreements, OJ C 321, October 22, 1997

[60] W. Clinton, A. Gore. (1995). *Reinventing Environmental Regulation.* USEPA, Office of Policy Analysis and Review, Office of Air and Radiation, Washington, D.C.

[61] OECD. (2003). *Voluntary Approaches for Environmental Policy. Effectiveness, Efficiency and Usage of Policy Mix.* OECD, Paris

3 The South African Environmental Management Cooperation Agreement

3.1 The use of EMCA

While environmental law and policy in South Africa has evolved significantly in the recent years, there has been more evidence of legislative reform in the area of resource management (land, water, forestry) than in pollution control, waste and energy management.[62] A legal framework for environmental management has been developed after 1996. The new Constitution of the Republic of South Africa and The Bill of Rights introduced the notion of securing ecologically sustainable development and it guarantees the right to an environment not harmful to health or well-being. The Constitution also makes provision for co-operative governance in sections 40 and 41. Two years later, after an extensive consultation process through the Consultative National Environmental Policy Process (CONNEPP),[63] there was the promulgation of the National Environment Management Act n°107 (NEMA). The Act includes new principles like the "polluter pays principle", the "from cradle to grave principle" and the principle of "environmental justice". The last one requires that adverse environmental impacts are not distributed so as to unfairly discriminate against vulnerable and disadvantaged persons[64]. Section 35 furthermore provides an interesting provision for South African law: the juridical basis for the implementation and development of environmental management cooperation agreements (EMCAs). It provides the relevant governmental organs the authority to stipulate agreements between the government and the private sector.[65] More specifically section 35 (2) gives to the Minister of the Department of Environmental Affairs and Tourism (DEAT) and every MEC (local authorities) or municipality the incentive to enter an EMCA for the purpose of promoting compliance with the principles of the Act.[66] The term EMCA is not defined in the Act. However, guidelines for the implementation of EMCA were issued by the government in 2003[67]. According to section 35 (1) EMCAs are administrative agreements, so the legal effect of these agreements is determined by administrative law. Given the provision for co-operative governance and the introduction of cooperation agreements, the question is to what extent EMCAs can be used to promote co-operative governance and who can become parties of the agreements, and what will be their role as stakeholders. Albertyn and Watkins[68] commented that EMCAs were a contested outcome of the CONNEPP. There

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[62] J. Glazewsky. (2002). The rule of law: Opportunities for environmental justice in the new democratic order. University of Cape Town Press in *GroundWork. (2002). Corporate accountability in South Africa: The petrochemical industry and air pollution. GroundWork report.* p. 11

[63] The consultation process was jointly managed by government and delegated representative NGOs, trade unions, business and industry, and communities. The business representatives have persistently included the issue of voluntary agreements in the agenda. J. Glazewsky. (2002). The rule of law: Opportunities for environmental justice in the new democratic order. University of Cape Town Press in *GroundWork. (2002). Corporate accountability in South Africa: The petrol chemical industry and air pollution. GroundWork report.* p. 15

[64] GroundWork. (2002). *Corporate accountability in South Africa: The petrol chemical industry and air pollution*. GroundWork report. Available on line at www.groundwork.org.za [12 July 2004]

[65] NEMA, 35 (1)

[66] NEMA 35 82) (a) (i) and (ii) EMCAs are agreements that can be promoted only by "every organs of the state which has jurisdiction over any activity to which such environmental cooperation management agreement relates" and "the Minister and the MEC concerned".

[67] Department of Environmental Affairs and Tourism. (2003). *Environmental Management Cooperation Agreements. South Africa Draft Guidelines for Discussion.*

[68] C. Albertyn, G. Watkins. (2002). Partners in pollution: Voluntary agreements and corporate green wash. Booklet 2 in *M. and D. Hallowes. (2002) South African people and environment in the global market. GroundWork*. Introduction

are a number of issues that were not sufficiently clear in sections 35 and 45 of the NEMA. This and the next paragraph will try to explain how the debate has evolved. Interestingly section 35 (2) 8b) states that EMCA must only be entered into force "after compliance with such procedures for public participation as may be described by the Minister". Moreover it is important to ascertain whether NEMA implies that is peremptory for the parties (DEAT, MEC and concerned municipalities) to be part of the EMCA. It is not clear whether article 35 attempted to introduce a principle similar to the subsidiary principle of the EU Constitution, where the local authority that is more close to the problem has the duty to take care of the issue of political relevance and therefore should be involved. Art 35 also contains a directory term. The provision states that the relevant parties *may* enter the agreement. So this is an indication that not all the parties mentioned have to enter the agreement. During the consultative process the NGOs representatives agreed in principle on the possibility to use voluntary agreements to promote environmentally sound industrial practices, however their opposition became strong lately, when they started to demand the government to use them only under certain regulatory conditions and basic enforcement that make them work effectively.[69]

3.1.1 The role of leadership of the government and industry associations

In the year 2000, a group of negotiations have been started between the government and industry associations. Voluntary environmental agreements have been proposed by the government to four industrial sectors (the Mining sector, the Chemical sector, the Oil and Refinery sector and the Metal processing sector). After negotiations had progressed at national level with the industry associations for almost one year, already in the end of 2001 the prospective to reach an agreed target vanished. Even if the National Environmental Management Act attributed to Environmental Management Cooperation Agreement an important role in promoting compliance with the principle laid down in the act, including the objective of promoting public participation, neither the government nor the industry have been able to promote the necessary conditions for a broader regulatory and participatory framework of EMCAs. The National Environmental Advisory Forum (NEAF) has been given the task to assess the overall functioning and efficacy (or failure) of the EMCAs. Since then a few other not successful attempts have been made. The implementation of the environmental quality remains a challenge to be tackled both with regulatory and non regulatory approaches.

The government has tried to agree on air emission targets with the key industrial sectors responsible for air and other pollution. However, after more than two years of negotiation, and targets agreed within two industry associations, the government has stepped back and not accepted the agreements. The chemical and the refinery industries have been leading exponents of the process with the Refinery Manager's Environmental Forum (RMEF) and the Chemical and Allied Industries Association (CAIA). They represent the interests of companies such as Shell, BP, Sasol, Caltex, Petronas. They also belong to a business lobby called Business Action for Sustainable Development, which is pushing a global agenda of voluntary agreements and self-regulation in the name of sustainable development.

The Change of the minister of DEAT and a growing NGO opposition have made that the process did not continued. It is not easy to understand why the process of formalizing these government-industry partnerships has stalled just before they were meant to be showcased at the World Summit on Sustainable Development, as declared by Groundwork in a repot

[69] Chris Albertyn, member in the NGO delegation of the consultation process for the National Environmental Management Act, Personal conversation, [3 August 2004]

presented at the Summit.[70] According to Werner Scholzt[71] who in 2001 was working for CAIA, there were several problems. The negotiation with the Chemical sector was involving three government bodies (Ministry of Environment and Tourism, Ministry of Finance and Ministry of Energy Resources and Minerals) and there was a lack of coordination among them. The generic framework proposed by the industries involved the creation of task teams on different themes like air and waste management. CAIA has been leading the negotiation process and has proposed a ten years plan divided into phases with amendable overarching targets and environmental management plans for individual companies. Meanwhile the government hosted a workshop to discuss a set of guidelines for the implementation of voluntary agreements. In the guidelines four important requirements are mentioned: multi-stakeholder participation in the design process, quantifiable targets and indicators of compliance, independent monitoring and sanction mechanisms. Nevertheless the government departed from the negotiations. At that stage some of the industry associations tried to create Industry Codes voluntary. For example, CAIA[72], the association for the chemical companies, has been involved in the Responsible Care initiative and they are currently preparing a protocol on energy efficiency measures.

3.1.2 Stakeholders participation: the missed opportunity

Civil society may be party to an EMCA or it may join only the negotiation process as a relevant stakeholder. Even when stakeholders are not part of the agreement, they will have an important role to play for the implementation of the EMCA. They have to fulfill a watchdog function. The Section 35 does not include special provision for the role of non-parties. Public participation in the process of governance is a sensitive issue in South Africa due to its history of exclusion of the people, especially for the black communities. Uncertainty regarding the role of stakeholders in relation to EMCA has created resistance from NGOs and community-based organizations and it may continue to create resistance if uncertainty is not effectively addressed. One of the main problems encountered by the government in the nation wide negotiation process for establishing EMCAs has been the opposition of the NGOs. Often the reason behind the opposition is the negotiation approach, or the level of the target, but more the non early involvement and engagement of the NGOs in the discussion panels. The NGOs interviewed in Cape Town (North South South and SEA) have little experience in voluntary environmental agreements, but they are currently dealing with energy issues. Consequently, it is important to make them understand what a voluntary agreement can offer and how it can be used in a weak regulatory context and ask them which would be their role to make it happen. There are, however, some concerns about a lack of trust from NGOs and community-based organizations both towards the public sector and in the private one. My interviews revealed that seldom the private sector is involved as a partner in NGO projects or in local government projects (either at Municipal or at Province level). Therefore there is an important need to explore the private activities, in terms of production processes, environmental management systems in place, strategies and also motivations to work with non-business partners.

Concluding, it seems important to reflect on three main causes mentioned by NGOs regarding the failure of EMCA in 2000-2001. The wrong timing since EMCA's have been proposed ahead of any legal certainty and requirements and they have been delaying the

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[70] GroundWork. (2002). *Corporate accountability in South Africa: The petrol chemical industry and air pollution*. GroundWork report. p.18 Available on line at www.groundwork.org.za [12 July 2004]

[71] Werner Scholz, Personal conversation [2 August 2004]

[72] CAIA, Chemical and Allied Industries Association (CAIA) Available on line at www.caia.co.za [3 August 2004]

development of legally binding standards for major pollutants (the government was discussing an Air quality Act). The wrong process because the negotiations have been industry-driven and they have excluded affected communities and finally a wrong content because the agreements have tried to address air pollution where air emissions[73] (beside SO_2) are not yet regulated in South Africa.

3.1.3 Decided area of intervention (water, waste and air) and proposed one (energy efficiency)

Initially the government has proposed to address water consumption and effluent pollution levels, waste minimization and hazardous waste safe disposal and air emissions. A lot of attention has been devoted to address air pollution problems. The fact that a Clean Air Act was expected soon has mobilized the industry associations to address the issue through voluntary agreements. The belief that without that Act no voluntary commitment would be possible has become a barrier. Discussing with officials and experts[74] that have been involved in the implementation of EMCAs, I realized that now the government is thinking to address other kind of issues with voluntary initiatives like energy efficiency, climate change and solid waste. They are considered softer issues in the sense that are less critical and more easily negotiable.

3.2 Limitation of EMCA process at national level: a look into the system of incentives, pressure and motivations

The process initiated in 2000 by the Government to promote EMCAs has been the natural step after the National Environmental Management Act that created provisions for cooperative governance. It has to be noticed, however, that the Section 35 that introduced EMCA in the legislative landscape of South Africa, contained less specifications than discussed during the consultative multi-stakeholders process and therefore a lot of specifications, including the typology of environmental impacts to be addressed, have been arguments of discussion. Conflicting interests, often results of social, economic and also political differences and ideologically fragmented views, have emerged in the consultation processes. There was an absence of clear environmental policy objectives from the government side and some reluctance to tackle environmental impacts that have never been effectively regulated before like air pollution, revealing a lack of expertise and political commitment.

The government has entered the negotiation without having clear assessment of the typology of regulatory gains that it wanted to give as incentives to the industry sectors and without specifying a defined timeline for the targets to be agreed. There is the need to plan the time that the negotiations will last and the resources needed to support the cooperative process. Especially where the amount of resources is limited, it is important to make clear with the industry sectors what the government can offer in term of coordination of the process and for how long. Moreover the government has to plan carefully what sectors to involve. The four sectors involved in the negotiations in 2000 were considered from the NGOs and community-based organizations as highly polluting and irresponsible sectors and their intentions to enter the agreements have been seen instrumental to protect their interests. A strong communication strategy should have supported the negotiation process to allow both the

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[73] The applicable law for air pollution is the Atmospheric Pollution Prevention Act which dates back to 1965 and it controls four types of pollutants: NO_x, smoke, dust and vehicular emissions. There are not binding targets nether at national or regional level.

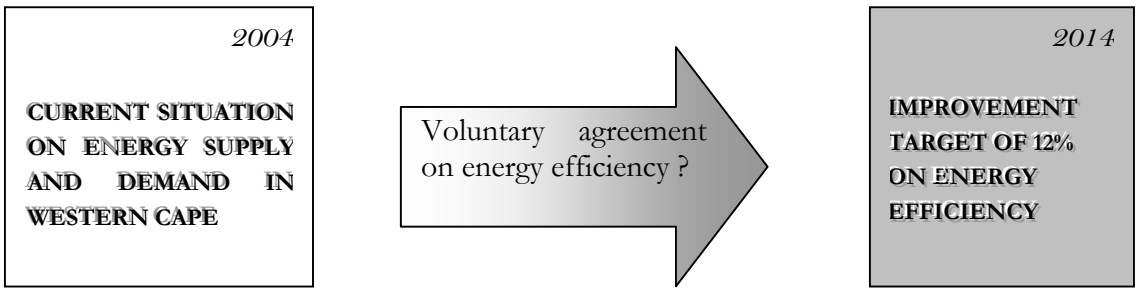
[74] Mark Gordon, Carin Bosman, Jonathon Hanks. Personal conversations [21 July 2004]

industries and the government bodies to be rewarded in terms of commitment, reputation and visibility.

Instead both parties have been incautious and thus exposed to critics. Cooperative governance processes are often complex and difficult to manage but they have great potentials to create trust among parties that have rarely cooperated together before. To achieve this stage, particular attention has to be dedicated to the credibility of the process. To address all major environmental impacts in a systematic approach, and all at once, might be very hard, especially when voluntary initiatives have never been implemented before. Even if the idea behind is to promote environmental management thinking into the management practices of the firms, it is important to narrow down the scope of the agreement initially to something easy to monitor and report. An extremely important aspect of voluntary agreements concerns the learning objective of self-monitoring and external reviews that provide companies and governmental bodies with useful data to be used to reach the agreed target and go even beyond.

3.3 The idea of a thematic EMCA at local level

When I started to look at the use of voluntary agreements in developing countries I become fascinated by the experience of EMCAs in South Africa. It is definitely promising when we look at the potentials that haven't been exploited yet and complex at the same time since the previous attempts have received critics from the civil society and they haven't been successful. I thought that it might be interesting to explore a thematic EMCA on energy efficiency at local level. The next chapter will present the current situation on energy policy in South Africa and the draft of the national strategy on energy efficiency issued by the government in April 2004. The data collected through interviews have been used to see if a voluntary agreement on energy efficiency could help the Province of Western Cape to approach the 12% improvement target on energy efficiency by 2014 as decided by the national strategy.



The socio-economic context has been analyzed, looking at the four dimensions already described in the methodology: 1) the policy traditions in cooperative governance of the Province of Cape Town and the city Government, 2) the structure of the sectors that the voluntary agreement want to involve have been limited to some members of the beverage sector, the forestry sector, the packaging sector, the retail sector and large building users like insurance companies and private hospitals, 3) the feasibility of use alternative instruments and 4) the market characteristics including the consumer demands and the competition level within the sector. The objective of the agreement being progress in energy efficiency, the research had to assess also the energy supply industry that is currently in a phase of transition from a state monopoly to a public company with a plurality of independent power producers. A voluntary agreement on energy efficiency would usually propose one or a combination of the following targets:

1. Energy efficiency improvement target per unit of production
2. Renewable energy consumption target
3. Carbon dioxide reduction target

4 The Western Cape Province

This chapter presents the analysis of the external context that determines the conditions under which the hypothesis of implement a voluntary agreement on energy efficiency has been tested. The geographic boundaries of the analysis have been limited to the Province of Western Cape. The Republic of South Africa is geographically diverse and it is administratively divided into five Provinces. In the South West is located the Province of Western Cape, with the main urban settlement being the City of Cape Town. Cape Town is the second largest city in the country.

The **external preconditions of a voluntary agreement** are defined by the socio-economic context. As presented in the methodology, four categories are investigated to see how they might affect the performance of the agreement, alone and combined: the policy tradition, the existence of an alternative legal instrument, the sector structure and the market characteristics. After that the **stakeholders analysis** is presented.

4.1 The policy tradition

The policy tradition has been explored looking at the decision-making dynamics in the area of energy policy at local level and the attitudes towards consensus seeking. Subsequently, the national strategy on energy efficiency is presented with its targets and implementation approach to see which major stakeholders are considered important to engage. Finally the administrative capacity of the public authorities and the leadership style of their representatives are assessed.

Following a policy process approach, a look at the interactions of the parties during the energy policy process is presented. Following an economic approach, the point of view of the single actor and his rational behaviors is also to some extent explored. Finally following a knowledge based approach, the interaction among parties are revealed and it emerges a lack of leadership in the government officials.

4.1.1 The energy policies at local level

This paragraph investigates the actors that are involved in the design of energy policies at local level and their actual role. It then contributes to explore the major potential and shortcomings of the decision making process. This analysis will be used to assess which local authorities or group of local actors might be the potential promoter of the agreement on energy efficiency.

In 2003 the city of Cape Town decided to have a local energy strategy that could assist the municipality in making strategic long-term decisions and it could help institutionalize energy approaches and practices at local level, with a framework that provides a clear vision and direction. It will also help with the prioritization of energy related projects that are currently taken by different departments, and the integration of energy objectives (like improved energy service delivery, affordable clean energy sources, energy efficiency, etc.) into all the local authorities' functions and programs[75]

The State of Energy report published in 2003 provided the basis for the development of the strategy, gathering energy data from two main inventories: the greenhouse gas inventory compiled in 2002 by Sustainable Energy Africa as a result of the campaign Cities for Climate

[75] City of Cape Town, Sustainable Energy Africa. (2003). State of Energy Report. p. 1

Protection[76] and the Energy Database of the Energy Research Institute at the University of Cape Town (UCT) that provides energy supply and demand data on a national and provincial level.

The core role of energy within cities is being increasingly recognized by local authorities and awareness of the environmental and health problems related to energy use has emerged in the recent debate. As the Report stated "energy plays a central role in the functioning of cities; affecting local economies, social welfare and the environment" [77]. South African cities are very new to a comprehensive approach to sustainable energy that promotes economic development, meet basic needs while reducing environmental impacts. Electricity distribution and electrification of informal settlements have been the main focus for a lot of public administration; moreover electricity sales are, for most of them[78], a main source of income (around 33%).[79] Only recently, the City of Cape Town has tried to integrate the energy objectives into functions and programs as well as making them part of the integrated environmental policy. Questions like how much energy is used, how efficiently it is used, what kind of energy sources are they relaying on have been answered by the State of Energy Report through a discussion with relevant stakeholders (mainly energy producers and distributors, academic from the Energy Research Center at the University of Cape Town, NGOs, functionaries from the municipal and provincial government). An energy vision and goals document was produced that has in the end been used to draft the energy strategy for the Metropolitan area. When I meet Craig Haskins, the person in charge of the Energy Strategy development in the municipal government, he declared that through the State of Energy process the city has learned that over 40 energy-related projects are ongoing and it has developed a dynamic and participatory energy strategy draft to organize these and other projects systematically. The Heads of the department of housing transport, energy distribution, commerce and industry have been gathered into reference groups and they have discussed, in ad-hoc meetings, the goals of the energy strategy for the city. The process has been supported by the Sustainable Energy Africa (SEA). SEA is an NGO that has been financed by DANIDA (Danish International Development Agency) for the implementation of a national partnership for urban Sustainable Energy for Environment and Development (SEED) in South Africa.

It is common in South Africa for the local and national authorities to have external support and often strategy plans are outsourced to consultancies and to some extent NGOs.[80] It is also common that officials move from the public authorities to work for a consultancy or an NGO. This situation increases the number of stakeholders participating and contributing to the decision making process, but on the other hands it might result in a lack of persons within

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[76] Cities for Climate Protection is a campaign launched by ICLEI (International Council for Local Environmental Initiatives) in 2002 that helps the local authorities to reduce greenhouse gases emissions.

[77] City of Cape Town, Sustainable Energy Africa. (2003). Cape Town Energy Strategy. Draft October 2003. p.1

[78] Currently the electricity distribution system is under reformation in South Africa. There is the plan to reduce drastically the number of electricity distributors from 286 to 6 regional electricity distributors (REDs) by 2005. This might change the current situation of City of Cape Town that nowadays sells electricity to a large portion of the metropolitan area, while the other part is supplied by Eskom, the national electricity producer. The municipalities will have a share in the REDs but the situation is not clear yet about how that share is going to be calculated.

[79] Gisela Praad, Energy Research Institute, Personal conversation. [12 July 2004]

[80] Energy policy development in South Africa is done by the government which, in turn contracts several institutions to undertake selected policy studies. This system works fairly well but it can be improved. The government needs a well-organized structure that undertakes screening and synthesis of the many options available. This structure should also have strong international linkages. A very important role of the structure is to identify the critical areas where the government needs intellectual input for policy-making" in ERC. (2004). *Energy for sustainable development: South Africa profile. Phase 1 final. University of Cape Town. p.21*

the local authorities devoted to manage the result of the strategy development process. I had the impression when I interviewed Craig Haskins and Gordon Munro that this has happened with the Energy strategy of the City of Cape Town too[81]. They have a draft energy strategy and a renewable energy target of 10% for 2020 but they haven't created an energy department yet and there is little clarity on how to operatively implement the strategy and the target. I have also realized that they haven't understood how they are going to implement the national strategy on energy efficiency. Within this picture, I presented my research idea to look at the potentials to use voluntary initiatives for energy efficiency, and so when I asked them their opinions, they were in difficulties to foresee which instrument to use. They said they have just a draft strategy and some pilot projects in energy efficiency buildings and little possibility to proceed systematically to address the energy issues with the current allocation of roles and budget.

However the draft strategy itself with the five visions listed and their related goals[82] have to some extent tackled two areas of concern of energy efficiency measures: commitment of the city to reduce the dependency on non-renewable energy and a general commitment to use and manage energy in an effective way both in the city of Cape Town's operation as well as in residential, commercial, industrial and transport sectors. So what they have to understand is how to implement and, even more importantly, who are the players that might have a major role in the change of the energy system.

In term of decision making, who is having a major role in the determination of the energy strategy for the Western Cape Province are the City of Cape Town (investing resources and public image), Sustainable Energy Africa (coordinating the process), the Energy Research Center (providing understanding) and to some extent the Province of Western Cape.

The last two collective actors might have a leading role in the future. The Energy Research Center has been involved in the preparation of the national policies, contributing to the Energy White Paper (1998); in the draft White paper on "Renewable Energy and Clean Energy Development" and it is currently involved in Demand Side Management projects promoted by Eskom and rural electrification projects. This institute might support the local authorities with the implementation of the national strategies at local level and help them to work jointly with the industries in promoting energy efficiency investments.

A number of Province departments (Environmental Affairs and Development Planning, Economic planning, Transport and Public Works and Transport Department) have been involved in the energy strategy process. A new department has been created in June with the task of coordinating the transversal issue within the Province. Energy being one of these, they have to start to develop a strategy at Provincial level and this implies strengthen the collaboration with the Municipality of Cape Town. The head of the department arrived from a career in water management at national level and he has been involved in the implementation of EMCAs when he was working for the DEAT (Department of Environmental Affair and Tourism). He is positive to the idea to create a voluntary agreement on energy efficiency at Provincial level, involving visible sectors that later on might bring other sectors to join the initiative.

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[81] Craig Haskins, responsible for the energy and climate change program of the City of Cape Town, Personal Conversation. [16 July 2004]

Gordon Munro, head of the electricity department of the City of Cape Town, Personal Conversation. [19 July 2004]

[82] For a more comprehensive review of the strategy see the appendix where is reported the text of the Draft Energy Strategy of Cape Town.

A crucial aspect of the current situation is the lack of coordination at the planning stage between the local authorities and the national and provincial level in energy management. The picture is even more complex if we consider that local authorities have to deal at national level with a plurality of bodies: there is a National Energy Regulator (NER), a public company, Eskom, that is the main producer and distributor of electricity in the Country and in the African continent with a relevant contractual power and at least two ministries involved in energy related policies, DEAT and DME (Department of Minerals and Energy).

4.1.2 The National strategy on energy efficiency and the role of cooperative governance

At National level other actors are involved in energy policies, and again the power relations among them are complex and difficult to reveal. Some of these actors might be involved in the design of voluntary agreements concerning energy efficiency or at least they have to revise and approve the contents of the agreements. The role of national government bodies or organ of states in the development of local EMCAs as it is described in the NEMA art 45 (2) is not extensively defined by the National Act. However, reasonably, national government bodies have to provide consensus but not to be party of the agreement when it is promoted by local authorities[83].

Energy has been a strategic asset for South Africa in the past thirty years. South Africa consumes 40% of the total electricity[84] consumed in the whole African Continent and it is one of the highest emitter of CO_2 per capita in the world. It has signed the Kyoto Protocol in March 2002 and it is committed to improve its energy performance. Since electricity prices have been historically low (due to heavy subsidies) South Africa has had a competitive position, especially for the energy intensive sectors like mining, metal and oil processing. These sectors have grown under favorable conditions, becoming very profitable and large[85]. At the same time there has been little incentive to save electricity and reduce air pollution, since 79% of the electricity is produced burning coal.

The first National Strategy on Energy Efficiency arrived in April 2004 and it will hopefully change the system of incentives and regulation in order to promote a more energy efficient economy. The strategy, still a draft, is the follow-up of the White Paper on Energy Policy that in 1998 gave mandate to the Department of Minerals and Energy (one of the key players that decide energy policy in the country) to promote energy efficiency trough various means. It recognizes standards and appliance labeling to be the first measure to put in place in implementing energy efficiency. The strategy attempts to create an enabling framework for promoting energy efficiency using prescriptive-measures as the one mentioned in the White paper. The measures proposed included[86]:

1. Economic instruments

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[83] Werner Scholz, Personal conversation [2 August 2004]

[84] Energy consumption account for 15% of the Gross Domestic Product, See Department of Minerals and Energy. (2004). *Draft Energy Efficiency Strategy of the Republic of South Africa.* p.28 Available on-line at http://www.dme.gov.za/energy/pdf/energy_efficiency_strategy.pdf

[85] Most of the companies working in the mining sector, the oil and metal processing sectors are members of a lobby group called Energy Intensive Users Group (EIUG).

[86] Department of Minerals and Energy. (2004). *Draft Energy Efficiency Strategy of the Republic of South Africa.* p.7 Available on-line at http://www.dme.gov.za/energy/pdf/energy_efficiency_strategy.pdf

2. Legislative means
3. Energy labels
4. Information activities
5. Energy performance standards
6. Energy Audits
7. Energy management
8. Promotion of energy efficiency technologies

Among these measures, the ones that required minimal investments will be prioritized. It is the intention of the Department of Minerals and Energy to cover all sectors trough the creation of sector programs that optimize energy sector development, through efficient utilization, production and consumption of energy resources. These programs will be monitored and reviewed constantly. So far no further implementation plan has been released and it is not clear when the government is going to take the next step.

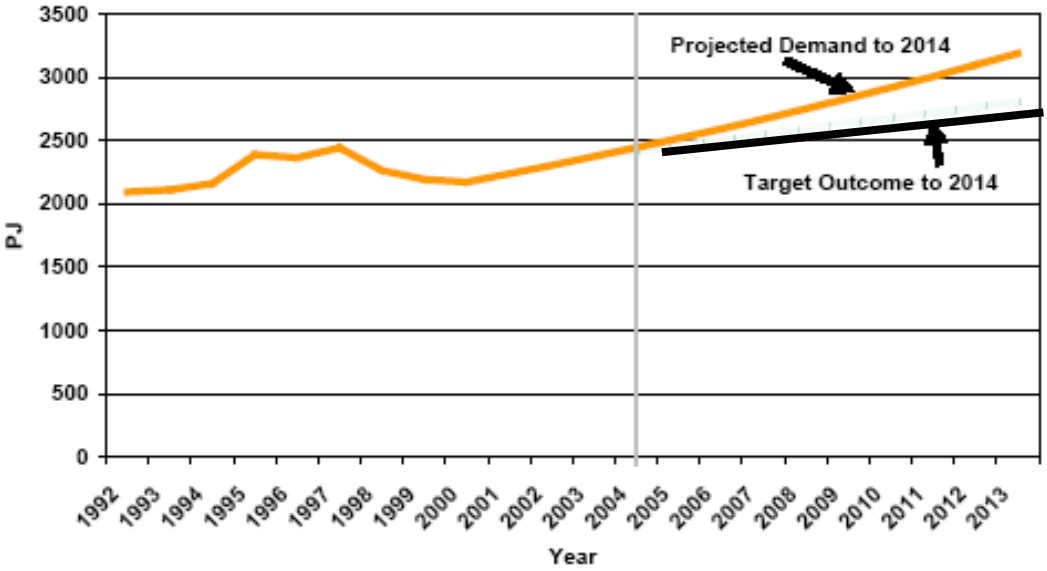

Figure 4-1 South Africa energy efficiency target for 2014

Source: Department of Minerals and Energy. (2004). *Draft Energy Efficiency Strategy of the Republic of South Africa.*

The figure shows the 12% improvement target in energy efficiency that the strategy proposes as guideline to aspire to. The draft describes the target as something that should be modifiable and achievable. The final target is measured as a mean of the specific sector targets. The energy performances of sectors are quantified as follow: the industrial sector with a target of 15%, the Power generation sector which has not a defined target yet (negotiations with Eskom are in progress), a commercial and public building target of 15%, a residential target of 10% and a transport target of 9% that will be achieved mainly through regulatory measures. For all the other sectors the document proposes a mix of measures. It doesn't seem from the draft

that voluntary agreements have been largely considered. However Eskom[87] is promoting a demand side management program that might be a interesting entry point for the engagement of industries in a voluntary agreement on energy efficiency that will help to achieve the national target of 12%.

A number of barriers have been discussed in the draft strategy document regarding the effectiveness of the measures proposed and I think these are partially the same barriers that have to be considered in the design of a voluntary agreement on energy efficiency: The barriers are presented below together with the arguments proposed by the Department of Environment and Tourism.

1. Relatively low priority of energy efficiency when compared with other pressing national issues. It is recognized however that energy is an integral part of the economic development and a quality and healthy life.

2. Low electricity price makes lengthy the payback time of energy efficient investments. However most of the investments promoted by the strategy have three years payback time even with low electricity price. Some externally funded projects (like Clean Development Mechanism projects that aim at obtaining carbon emission credits) might support companies to tie-up resources for longer-term projects.

3. Lack of knowledge and understanding of energy efficiency potentials due to overlook and superficial analysis. However the strategy itself will enhance awareness.

4. Institutional barriers and resistance to change.

5. Degree of uncertainty due to the instability of the national currency and the present slowdown of the exportations.

6. Imperfect information regarding the range of performance on energy efficiency products.

7. No subsidies or financial support will be available to implement the strategy on energy efficiency, while once-off basis subsidies have been announced for renewable energy.[88]

The South African energy arena is characterized by a number of diverse players within the fields of energy supply (Sasol that is the only natural gas company, Oil and Refinery industry (Caltex, Shell, BP, Eskom)), energy distribution (Eskom and local authorities), energy efficiency (Eskom, DME, ESCOs', energy consultants) and energy regulation (National Energy Regulator and the South African Bureau of standards). Energy efficiency will be promoted effectively only through well co-coordinated initiatives and effective promotion in order to activate the different players.[89] In addiction to the mentioned actors there is a major industrial lobby group, called intensive energy users group (IEUG), that promotes the interest of the energy intensive industries (Mondi, Sappi, Consol Glass, SAB, Anglo American Gold, Billington etc).

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[87] Eskom is the public energy producer and distributor. It will be more extensively presented in the next paragraphs where the process of privatization of the company and the liberalization of the energy sector is described.

[88] Department of Minerals and Energy. (2003). Renewable Energy White Paper. South Africa

[89] Department o Minerals and Energy. (2004). *Draft Energy Efficiency Strategy of the Republic of South Africa.* p.28 Available on-line at http://www.dme.gov.za/energy/pdf/energy_efficiency_strategy.pdf

4.1.3 Conclusions on the policy characteristics

There is a tradition of involvement of NGOs in policy making. The are, however, funded by the local government, so there is a form of dependency. The NGOs involved in the energy policy process have been working on energy issues before but not with industries and they are new on the debate on EMCAs. The Industry sector has also been involved partially in the process. No dialogue between NGOs and industry sectors has been developed yet. Regarding the level of trust, it is low from the NGO's towards the industries. While from my interviews has emerged that those industries have never thought the government as partner for energy efficiency projects and so the level of trust has to be discovered. Industries that are already doing some projects on energy management are collaborating with other organizations like Clean Development Mechanism sponsors, energy consultancies, foreign funding agencies and in some cases with universities.

The evaluation and monitoring of a policy is an important phase for resource development and innovation. The energy policy is still a draft but it is part of the integrated environmental policy framework. This framework has developed a tradition in discussion and evaluation of on-going environmental policies. There is however a lack of coordination with the national policies and bodies.

4.2 The existence of an alternative legal instrument to promote energy efficiency

What will happen in the case the negotiated agreement fails? This paragraph investigates the existence of an alternative legal instrument. The legislative threat is considered by NGOs members a key aspect for the support of any voluntary initiatives in South Africa. [90] Their argument is that the history of industrial development in South Africa has harmed poor and disadvantaged communities for so long that if they do not have a real legal threat, this will make the agreement weak already at the beginning of the negotiations. There is the opinion among officials that the main goal of any government sponsored intervention has to be the social stability. Therefore the public perception of the agreement is of extreme importance. The government has to show that it is able to make the industries respect and implement the negotiated targets. It seems that it is important to create show cases. The experience with EMCAs in 2000-2001 has failed also because the DEAT was in difficulty to make the targets binding for the industries. Another aspect is the credibility of the threat. The government has to be able to determine what it is able to negotiate and implement via voluntary programs and what it is not before entering a negotiation process. Uncertainty about regulation might be counterbalanced with taxes imposition at local level.

In the case of a thematic agreement on energy efficiency at local level, it is important to realize that assuming the provincial government and municipal government are the ones that are going to be in charge of the negotiation process, and assuming that they have the constitutional right to draw legally binding voluntary agreements; however they do not have entirely in their hands the power to promote alternative legal instruments. The role of energy regulation is shared between the National Energy Regulator and the Department of Minerals and Energy. In other countries (Denmark and United Kingdom) carbon dioxide taxes have been used as alternative instrument. The national government is discussing a Clear Air Act that will regulate air pollution. It seems that it will be approved soon. This act will decide whether or not the local authorities can impose local tax on air pollution.

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[90] Albertyn Watkins, Personal Conversation [03 August 2004]

4.2.1 Conclusions on the existence of an alternative legal instrument

The hypothesis to have an alternative legal instrument as stick behind the door in the case the negotiation agreements fails is based on the readiness of policy makers to use an alternative instrument in case of non-compliance to the agreement. It will require coordination between the national institutions and the local ones. The Clear Air Act might enable the local authorities to impose energy taxes. The chance that this will happen and that the alternative instrument will have more severe consequences for the target group than those resulting from the application of the agreement is low. An issue that has been debated a lot, is whether voluntary agreements without some degree of regulatory certainty are still a valuable policy option. It seems that they are when the promoter of the agreement is aware of the lack of regulatory capacity or poor regulatory implementation and he decides to explore other ways to obtain environmentally sound practices from companies offering them non regulatory gains.

4.3 The structure of the sectors

This paragraph explores a limited number of actors that might be strategic to be involved in the voluntary agreement, trying to understand their market position within their sector and whether they belong to an industry association. Being an exploratory analysis, the research has devoted time to gather qualitative data more that quantitative ones. The selection of the actors presented a number of difficulties; the process to frame industrial realities activities in relation to energy consumption has not be easy in an area where energy data at sectoral level have never been collected, and where they have started to collect data at municipal level in 2002. Information gathered was often diverging. The impossibility to gather comprehensive data on the energy consumptions and the limited time available forced use different criteria than the energy consumption levels. Four sectors has been excluded initially, the refinery sector (there is only a Caltex plant in Western Cape), the mining, the metal sector and the chemical sector. The main reason is that these sectors have their plants mostly nearby Durban and Johannesburg and they are already involved in projects at national level. Consequentially, the target companies have been chosen according one or a combination of the following characteristics:

1. Visibility of the sector
2. Involvement in the Black Empowerment Employment Charter
3. Environmental awareness (sustainability report or environmental management system)

The table below shows the sectors and the companies analyzed.

Table 4-1 Relevant sectors for energy efficiency targets in Western Cape

SECTOR/ DATA SOURCE	INTERVIEW	CONSULTANT	LITERATURE & WEB SITE
BEVERAGE	SOUTH AFRICAN BREWERY LIMITED	WINE INDUSTRY ECO-PRODUCERS	DISTELL WINE KWV ROBERSON RUPERT AND ROTHCHILD, FRANSCHOEK
FORESTRY	CAPE SAW MILL		
RETAILING		PICK&PAY CLIKS WOOLWORTHS	
HOSPITAL		MEDIC CLINIC GROUP	
INSURANCE		OLD MUTUAL	
PACKAGING			CONSOL GLASS

The coverage of the beverage sector has been restricted to beer and the famous wine of Cape Town. South African Brewery (SAB) limited is one of the seven breweries that belong to the multinational SAB-Miller. They have a market share of 98% on beer and 48% on alcohol. They are considered one of the more pro-active companies in South Africa and they are well known for that. However, the hierarchical division of powers makes SAB limited not independent from SAB-Miller. They have already in place a stretch target of 9.4 KWh per liter of beer. The energy cost is in average 3.5% of the production costs. The performance of every division is benchmarked with the performance of the other breweries annually. When I asked the engineer responsible for the environmental management system if he thinks that SAB limited could enter a voluntary agreement on energy efficiency, he replies: "Why not?".[91] Distell is the biggest alcohol company in South Africa. They have just started the environmental management system.

[91] Dean Martiz, Personal Conversation [29 July 2004]

The wine industry is large and wealthy in Cape Town and it is characterized by homogeneity of actors, large export markets and international standards of production. The wine sector is represented by two main industry associations: South African Wine and Brandy Association (SAWB) and the Wine and Spirit Board (KWV) that is the main promoter together with WINTECH[92] (an industry network of expertise and technology) of the Integrated Production of Wine[93] (IPW) management system. These two associations have promoted environmental management systems among their associates. A group of fourteen cellars in Franschoesk decided in 2002 to be ISO 14001 certified. They created an association called Eco-producers Association. Niels Birnardt, an environmental consultant, has been the initiator of the project. When he first approached Rupert and Rothchild winery, he found it difficult to sell the idea of environmental management. ISO was perceived as paper work. They did not believe the value of savings. He argued that a characteristic of the business activities in South Africa and especially in the wine industry is that they believe in savings only when you can prove them that the payback time is less than two years and when you can quantify key performance areas, and then you will have a chance to convince them.[94] However, the wine industry is changing approach towards environmental management since the beginning of 2004, becoming much more open to environmental management, due to a new legislation on effluent plants.

The forestry sector in Western Cape is not as big as in other part of the country but it is a significant energy user. I met George Tatham, one of the owners of the Cape Saw Mill and an expert on energy issues.[95] The company has three mills and 80 000 ha of forest along a corridor starting in Port Elisabeth and arriving almost in Cape Town. Their logs represent 4% of the national market and 23% of the regional one. There is not an industry association within the sector but almost all of the mills joined the Forest Steward Council Initiative in order to be able to export (customers demand a clean supply chain). The Cape Saw Mill is ISO 9000 certified. The cost of energy (2/3 electricity and 1/3diesel) is 10% of the production costs. They are planning to switch the electric boiler to biomass in order to save money but also to secure energy supply and avoid blackouts.

The retail sector is well represented in Cape Town (major groups have the head quarters there). Together with large office buildings they are currently developing projects with the only certified Energy Service Company[96] (ESCO) in the Western Province. Nova Lighting, the name of the company, is involved in some lighting projects with three main chains: Pick&Pay, Clicks and Woolworths, and with Cape News, the local newspaper. Eskom is covering 50% of the lighting investments through the Demand Side Management (DSM) Fund. This sector might be open to a target on renewable energy consumption.

A vast number of companies within the financial sector and the insurance sector have been issuing sustainability reports. Old Mutual, which is an important insurance company in Cape Town has been working to minimize the environmental impact in the last year, giving special attention to energy consumption. They issued in 2002 a corporate environmental policy. They

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92 See Enviropros Bulletin. Available on line at www.chemeng.sun.ac.za/Content/cpe.htm

93 See ww.ipw.co.za

94 Niels Birnardt, Personal Conversation [04 August 2004]

95 George Tatham, Personal Conversation [27 July 2004] He has been employed by British Petroleum (BP) for more than twenty years developing the market for gas in developing countries like China, Thailand, Peru', etc. He is also involved in wind energy projects nearby Cape Town.

96 ESCOs are certified by Eskom. See www. Eskom/dsm.co.za [25 July 2004]

also joined the Black Economic Empowerment (BEE) commission in 2000 and since then it has become an important aspect of the strategy of the company.[97]

Another sector recently interested by environmental projects is the medical sector. A consultant has involved a group of ten private medical clinics in setting up an environmental management system. The energy cost of running a hospital can be up to 7%. Air conditioning system and hot water usage resulted in the main energy intensive activities.

Finally the packaging sector has been explored regarding glass. Consol glass has one of the four plants in the area of Paar. The company has 70% of the market nationally.

4.3.1 The energy sector

Special attention has been devoted to the energy sector, especially regarding electricity, analyzing prices, subsidies and energy strategies. Primary energy enters the economy and it is transformed into final energy. The two main conversions of primary energy into final energy are electricity generation and production of liquid fuels in South Africa.

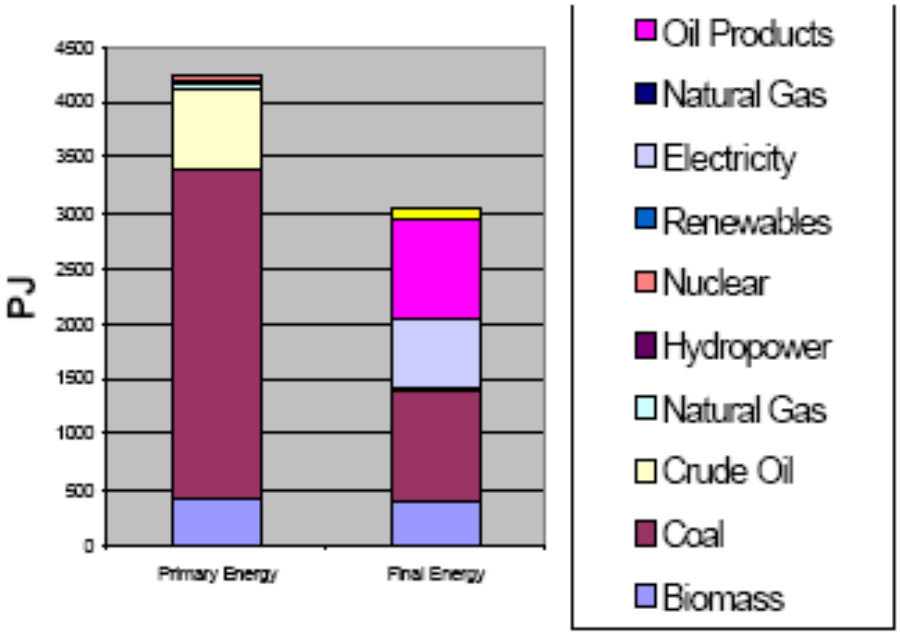

Figure 4-2 Primary and final energy in South Africa, 2000 Source: *ERC. (2004).* Energy for sustainable development: South Africa profile. Phase 1 final. University of Cape Town

4.3.1.1 The price and subsidies of electricity

Electricity price is a major driver for energy efficiency measures, currently there are two main group categories of prices charged: residential and industrial. The power sector, dominated by

[97] See http://www.oldmutual.co.za/corporatecitizen/EconTransform [12 August 2004]

Eskom, is under a process of liberalization in South Africa and this might change the level of subsidies devoted to the sector in the coming years and, in the end, affects price and energy management practices in the country. It is not easy to foresee who is going to bear the increase of cost (it is expected to be an average increase of 3% per annum[98]) but some conclusions can be drawn.
The main aim of the liberalization is to improve efficiency of the sector from both the operational and economic point of view and address the future challenge of secure and reliable energy supply and distribution. Among the reasons of the reforms, you can find:

1. the inability of the state to finance the building of new capacities and to provide maintenance (there are in average 5% loss in the distribution phase[99]),
2. the poor environmental performance of state-owned and state run power utilities and
3. the attempt to partially remove subsidies from the sector to raise capital for other public policies.

The electricity industry is almost entirely in the public sector. Eskom is a state-owned company and it produces 95,6% of the electricity, controlling 54 licensed power stations. It operates the national grid which has a total length of 539558 km of transmission cable. The remaining 4.5% are produced by municipalities and independent producers. It is important to notice that in order to get the license for a new power plant, an environmental impact assessment has to be conducted and approved by the Provincial Government.[100]Eskom sells electricity to distributors, who then resell to residential consumers, commerce and industry. The average price, per kilowatt-hour, is among the cheapest in the world. Its production cost is between 5-10 cents of rand/kWh (0.035-0.07 Euro/ kWh[101]). A study[102] of the ERC has reveled that this is attributable to several factors, such as:

- Access to large resources of low-grade coal and use of technologies that maximize economies of scale. To add to this, power stations are located near coal mines and enjoy the benefits of long-term contracts.

- Overcapacity from power stations, which are already paid for. This reduces Eskom's finance costs and enables it to peg electricity prices at a low marginal cost.
- Environmental costs are not included in the price of electricity and are borne by the society, especially the poor people that live close by the power plants.

- Eskom's investment has been subsidized through the Reserve Bank forward cover thus protecting Eskom against exchange rate fluctuations. Further financial benefits are that Eskom is exempted from taxation and dividends.

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98 Gordon Munro, Personal Conversation [19 July 2004]

99 David Chown, Energy consultant, Personal conversation [21 July 2004]

100 M.A.Conteh. (2003). Privatization and liberalization of the South African Electricity Industry. *Energy management News*. Vol.9 N 4 Available on line at http://www.eri.uct.ac.za

101 Rate exchange 1 Euro=7 Rand [3August 2004]

102 ERC. (2004). *Energy for sustainable development: South Africa profile. Phase 1 final.* University of Cape Town p.73-

Price for the private sector in the Area of Cape Town ranges between 30-36 cents of a rand/kWh and the price for industry is likely to be one third, around 12 cents/kWh.[103] The electricity tariff includes a transmission surcharge, utilized capacity surcharge and a voltage surcharge. The transmission surcharge depends on the distance from Johannesburg and it can be up to 3% in the costal area of Cape Town. The coast between Cape Town and Port Elisabeth suffers from a remote connection with Cape Town that it is then connected to Johannesburg. For this reason, the area has black outs and high cost of electricity (50 cents/kWh) due to high losses (20%)[104]. In the costal area of Cape Town, independent power producers are waiting to receive approval for the installation of 12 MW wind mills in Darwing and some other place nearby Port Elisabeth wind mills that will supply the city with green electricity.[105] The expected cost of green electricity ranges from 37 cents (based on 13 GWh/y production from the Darwing wind mills purchased upfront with a power purchasing agreements (PPA) of 20 years to 28 cents/kWh. However, it is not decided yet how much they will be allowed to charge by the National Electricity Regulator and according to what mechanism.
The National Electricity Regulator controls and regulates the energy industry. It licenses anybody wishing to generate and supply electricity and it controls price. For the year 2004-2005, it allows an increase in price of 2.5% against the request of Eskom of 8.5%. Major price increases and unreliable supply are expected after 2007 when the production capacity is not going to cover the demand of energy of the country. Some experts[106] argue that who is going to be affected most is the residential sector, others that the industry sectors will have to bear the costs since the industrial tariffs are really low. Companies pay different prices (there are currently more than 30 different tariffs) for electricity according to the amount of consumption and the peak load or off-peak time when the electricity is consumed. Energy intensive companies pay a maximum demand charge and an extra fixed fee per unit of electricity.

In the area of Cape Town there are no members of the energy intensive users group. The energy cost is in average 2.5-3.5% of the total production costs (beverage sector, forestry sectors, retailing sector, insurance sector, hospitals, and hotels)[107]. Some industries rely mostly on electricity as energy source (wine production, retailing sector, insurance sector, hospitals, and hotels). It might be that a future price increase, if consistent, is going to push some industries to invest in power generation and to be less dependent from electricity. Investments in energy production need a stable regulatory environment since they have a long payback time The industries more exposed to this kind of pressure will be the ones located in area not well served by the grid and the ones that have access to other energy sources like biomass. This pressure can, to some extent, be used to motivate them optimizing their business from the energy management point of view.

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[103] Gisela Praad, ERC researcher, Personal conversation [12 July 2004]

[104] Davin Chawn, Energy Consultant, Personal conversation [21 July 2004]

[105] Gordon Munro, Personal conversation [19 July 2004]

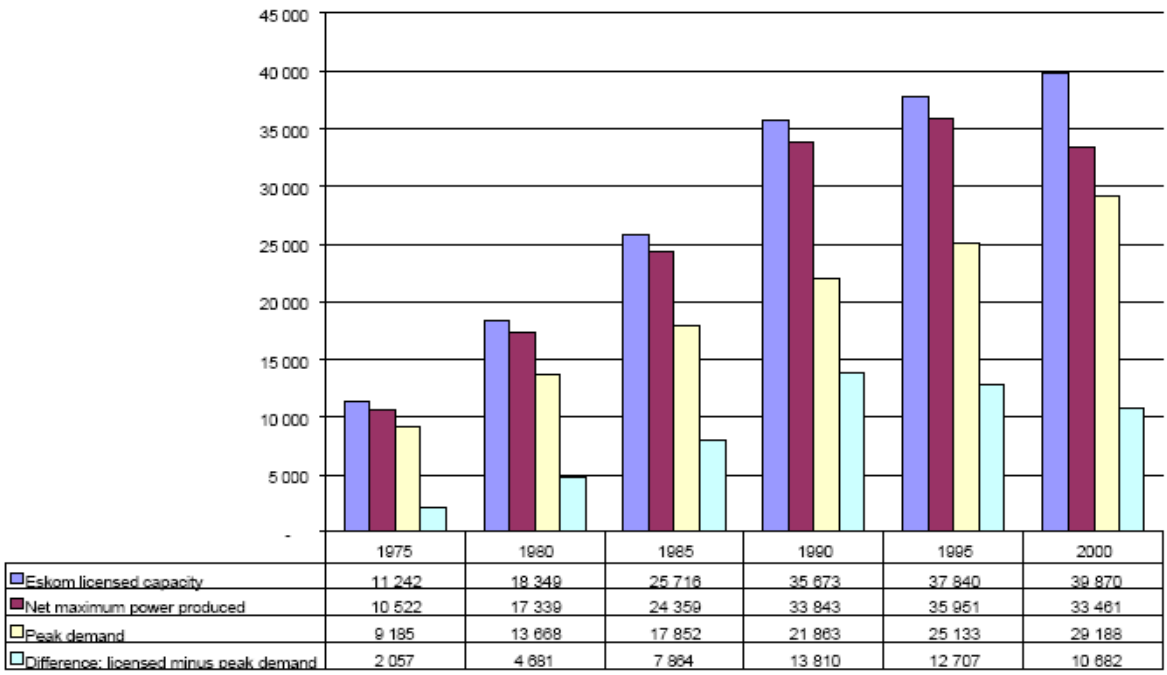
[106] Leilha Mohammed, Sustainable Energy Africa, Personal conversation [25 July 2004]

[107] Niels Birnardt, Personal conversation, [04 August 2004]

Figure 4-3 Energy production and consumption investment drivers differs in timeframe

4.3.2 Supply and demand side strategies

Another major driver is the future shortcoming of electricity that might have different effects. I have discussed it with my interviewees. The electricity prices are expected to rise in the future because electricity demand will outstrip the base load capacity of the existing power stations by 2007 and new power stations will have to be built. [108] Eskom is acting ahead promoting assisted demand side management projects that reduce the energy demand at peak load time and promote switching to energy saving technologies. In a strong drive to promote more efficient use of energy, Eskom has announced a new and more aggressive demand side management (DSM) program model. The focus of the model is leveraging the capabilities of energy service companies (ESCOs) to increase the capacity of the DSM program. Andrew Etzinger, Eskom's DSM program manager says, presenting the program, in the beginning of 2004 "Focused predominantly on the industrial and commercial markets, this model utilizes a shared-savings plan as an incentive to large electricity consumers to retrofit their facilities, with the assistance of Eskom".



	1975	1980	1985	1990	1995	2000
Eskom licensed capacity	11 242	18 349	25 716	35 673	37 840	39 870
Net maximum power produced	10 522	17 339	24 359	33 843	35 951	33 461
Peak demand	9 185	13 668	17 852	21 863	25 133	29 188
Difference: licensed minus peak demand	2 057	4 681	7 864	13 810	12 707	10 682

Figure 4-4 Eskom capacity and peak demand

[108] ERC. (2004). *Energy for sustainable development: South Africa profile. Phase 1 final.* University of Cape Town. p.69

When I interviewed Ray Nixon, the person responsible for DSM projects in Western Cape, he described the projects as projects promoting sustainability into the management of companies. Beside this far-reaching objective, the DSM program has experienced some shortcomings. Initially, the idea of the DSM fund was to cover 50% of the investments and to sign a contract in which the companies agreed to return 35% of the savings for the coming ten years to Eskom and the savings has to be equal to at least 500 kW. Following these conditions too few projects have been realized and the return of savings has been abolished. In the Western Cape Province, only two projects have been realized and a third is starting. The main barrier for the diffusion of DSM projects is the limited number of ESCOs and the fact that it is up to them to market the initiative. Some of the ESCOs have not been trained for energy audits and they have been dealing only with lighting projects and shift of production from peak load time to off-peak (50% of the projects).

The interesting thing about the DSM program is that it creates partnerships between Eskom, the ESCO company and either a municipality (in the case of publicly owned buildings) or a firm. Such a partnership is on energy efficiency and it has to be monitored by a third independent party that in the Western Cape has been the ERC, and more specifically Prof. Denis van Es. However, this kind of project does not motivate the company to go with energy efficiency projects. It is easy to conclude that such partnerships are something to which build on in order to create cooperative attitudes on energy efficiency.

4.3.3 Conclusions on the structure of the sectors

Regarding the structure of the sectors, the agreement will have more chance of succeeding if the target group can negotiate as one collective actor and thereby make it easier for the authorities to apply a negotiated agreement approach. The chance that the target group will be able to negotiate as one actor will depend primarily on the existence of a powerful player or association, and on the fact that the private parties belong to the same industrial sector or that they are all among more pro active companies of their sectors. There is already an interest of a small number of players, within the sectors covered by the research, in the area of energy management. It is not yet a dominant interest, and most of the actors are considered front-runners.

4.4 The characteristics of the market, the competitive structure and the consumers pressure

This section contributes to the understanding of the characteristics of the market, the competitive structure and the consumer pressure. The energy embodied in the products and their energy efficiency is not revealed to the consumers in South Africa. They are not providing such information with labels. The major environmental improvements in the production process and product design for the environment have been driven by international standards or supported by cleaner production projects funded by countries like Denmark, Sweden, the Netherlands, etc.

How much firms are exposed to high competition in the national market and to what extent they are trying to differentiate themselves by becoming greener is difficult to assess and it is outside the scope of this research. However, in the last years a lot of companies have started to publish environmental policies and reports or corporate social responsibility report (SAB, Old Mutual, Woolworths, Pick and Pay, South Africa Airlines, Ned Bank, etc) and the media are getting interested in this new business model. Environmental and social issues are

extensively covered by the local press.[109] The public pressure on these issues is also growing high. However the environmental impact of energy inefficiency is not easy to grasp and the awareness is very low, both in the public and in the private sector. The absence of complete and comprehensive energy data makes access to environmental information difficult.

Little incentive for efficient use of energy has been found in the industrial landscape of the Western Cape Province: the energy profile is dominated by heavy fuels (high sulfur content coal and oil). Old and inefficient technologies, poor insulation, lack of investments and awareness are common features.

4.4.1 Green Electricity

In 2003 the Electricity Department in Cape Town carried a market investigation to explore the demand for green electricity and the willingness to pay of potential customers, both residential customers and industries. The result showed a positive attitude of the public towards green electricity, positive enough to buy the 12 MW that the city Council will get from windmills in Darling and resell to private customers.[110] The positive attitude towards green energy might later on enhance a commitment on renewable energy sources from the business sector or from the public buildings one.

4.4.2 Social responsibility: poverty and energy efficiency

There is a strong link between energy and development. It is powerfully expressed by this sentence "One way of looking at human development is in term of choice and opportunities available to individuals. Energy can dramatically widen these choices"[111]. This reflection introduces the study of UNDP on energy and the challenge of sustainability. South Africa is a country that is taking the lead in poverty alleviation policies. The Black Economic Empowerment (BEE) is one of the measures proposed by the government. The industries that have signed a charter are: Mining Industry, Construction Industry, Maritime Industry, Financial Services Sector, Information Technology Sector, Tourism Industry, and Petroleum Sector.[112] Some other sectors are voluntarily adopting the requirements proposed by the BEE policy. Since poverty is the most fundamental reality of developing countries like South Africa, and the energy consumption patterns of poor people tend to add to their misery and aggravate their poverty, enhancement energy efficiency is also an issue of social responsibility. Companies, and especially the ones that are involved in the Black Economic Empowerment charters, should take their responsibilities and enhance continuous energy efficiency improvements.

4.4.3 Conclusion on the competitive structure and the consumer pressure

The idea, behind the hypothesis that BEE can be used to motivate companies to improve their energy efficiency, is that the agreement will be more feasible if the companies have a certain competitive incentive vis-à-vis the non-parties in the area covered by the agreement for example, to distinguish themselves, through a greener image. This in the end depends on the

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[109] Niels Birnardt, Personal conversation [04 August 2004]

[110] Gordon Munro, Personal conversation [19 July 2004]

[111] UNDP, UNDESA, WEC. (2000). *World Energy assessment. Energy and the challenge of sustainability*. UNDP New York. Overview p.3

[112] See http://www.workinfo.com/BEE/

awareness of consumers. When they are able to distinguish which companies are performing environmentally better or whether consumers are sensitive to the environmental quality or performance of the products, then the agreement can provide non-regulatory gains to the companies, parties of the agreement. It emerges that exported products are more affected by competition and consumer pressure. Internally the major pressure comes from the social responsibility of companies and the image that they might gain.

4.5 Stakeholders

There are various ways to identify stakeholders. The method utilized for this ex-ante analysis has been the identification of stakeholders according to the criteria described in the methodology and verification by other stakeholders. Discussion with those stakeholders early identified has been used to reveal their views on other stakeholders that they considered the most relevant regarding energy efficiency. The stakeholder analysis has tried to identify key interest groups and to draw out the interest of the parties to the problem, which the voluntary agreement wants to address. The stakeholders are catalogued in the two tables below. They can be divided in primary and secondary stakeholders according to their power. Primary stakeholders are those who are likely to affect or be heavily affected by energy efficiency policies. Secondary stakeholders are intermediaries of the process, the ones that can help the policies to be financed, implemented, monitored and verified.

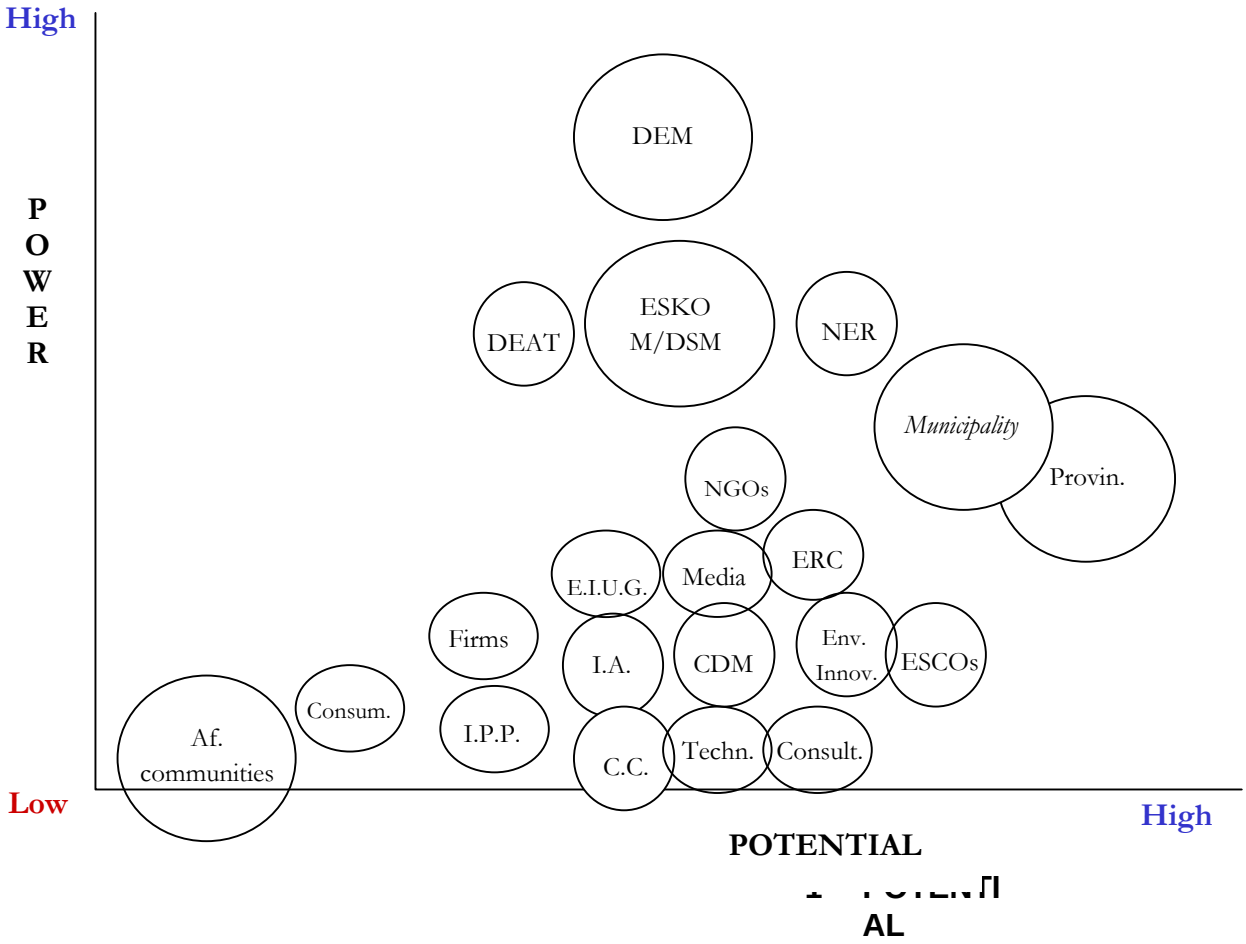

Figure 4-5 Power and potential relation of stakeholders

Source: Mayers et al. , 2001

Among the primary stakeholders there are the Department of Minerals and Energy, Eskom and the local authorities. The stakeholders affected by a non-efficient usage of energy can be named as affected communities. However they are underrepresented and disperse so their power is very limited and they do suffer from exclusion. Firms, especially energy intensive users, are both part of primary and secondary stakeholders. They are considered secondary stakeholders here in order to prioritize their role in promoting energy efficiency measures voluntarily. The number of secondary stakeholders is wide and it includes NGOs, the Energy Research Center, environmental and energy consultants, industry associations, the Chamber of Commerce, ESCO, independent power producers, the media, the energy technology providers, and firms, especially energy intensive users and energy innovators. It is important to address how the stakeholders gain and loose power and to distinguish how the stakeholders can influence the direction of the negotiation process.

Four typologies of power are important to recognize according to Filer and Sekhran[113]: the bargaining power, the managerial power, executive power and positional power. The *bargaining* power is the capacity to extract resources or other concessions by some combination of persuasion and force. The two stakeholders that detain *bargaining* power are the main parties of the agreement:, the local authorities and the firms involved in the negotiation process. The second power is the *managerial* power, the capacity of control the activities of other stakeholders and to determine the quality and quantity of their commitments. The industry association may play this role for the wine and alcohol industry. The Chamber of Commerce can also play this role, if it will start to deal with environmental issues. Alternatively ESCOs can become the stakeholders who estimate and quantify the energy efficiency potentials. The third power is called *executive* power and it is the capacity to meet the needs and demand of other stakeholders, thus increasing one's authority over them. This power is usually in the hands of the coordination body. It seems that a third party might better fulfill this role, for example an NGO, or a coordination committee with NGO members including one that deals with CDM projects, an energy consultant and a representative of ESCOs. The last power is called *positional* power and it represents the capacity to secure the support of other stakeholders and the public, on the assumption of a common interest. The media and NGOs are designators of this power.

Another interesting aspect is to look at the relations between the stakeholders: the existing ones and the ones that need to be developed. Among primary stakeholders the relations are institutionalized, however a better coordination between the national body and the local one has to be promoted. Local authorities have to work together with Eskom and the National government on energy efficiency.

Among secondary stakeholders the relations are more causal, ESCOs deal with Eskom and firms, some firms deals also with environmental consultants and independent power producers. The relations of the Energy Research Center are limited to some firms that are currently doing energy projects, with or without Eskom and the National government. Different NGOs are working with local authorities, other at national level and other with firms for CDM projects. The relationships between primary and secondary stakeholders are mostly created by NGOs and ESCOs.

However each stakeholders group is often internally divided and an analysis, limited in scope analysis like the one proposed here, cannot reveal the different currents and weight them.

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[113] C. Filer N. Sekhran (1998). Loggers, Donors and Resources Owners: Papua New Guinea Country Study. Policy that Works for Forestry and People Series. N° 2 IIED, London in *OECD,UNDP. (2002). Sustainable Development Strategies. A resource book. Earthscan, London. p. 128*

Concluding multi-stakeholders groups should design the information gathering, analysis and research process themselves, to ensure the ownership of the strategy and its results. The role of coordination is essential and it requires a secretariat or a coordination team. A voluntary agreement is a demand-driven policy tool and an action learning and interdisciplinary process. So the result of this stakeholder analysis has to be considered informative. It is a subjective exploration. A pre- agreement analysis can help the selection of the parties and suggest how to engage relevant stakeholders. It does not intend to be prescriptive.

Table 4-2 National and local stakeholders selected for the analysis of a potential voluntary agreement on energy efficiency in Western Cape, South Africa

STAKEHOLDER/ DATA SOURCE	INTERVIEW	CONSULTANT	LITERATURE& WEBSITE
NATIONAL LEVEL			
ESKOM	RAY NIXON, DSM PROJECT MANAGER		DSM REPORTS
NGO'S	CHRIS ALBERTYN, COMMON GROUND		REPORTS
INDUSTRY ASSOCIATIONS			CAIA WINTECH SAWB KWV
CDM PROJECTS	GEORGE STILES, CABLA		
DEAT, DME			REPORTS
NER			REPORTS
EIUG	ARNOT HEPBURN		

STAKEHOLDER/ DATA SOURCE	INTERVIEW	CONSULTANT	LITERATURE& WEBSITE
LOCAL LEVEL			
MUNICIPALITY OF CAPE TOWN	ELECTRICITY DEPERTMENT- GORDON MUNRO ENERGY AND CLIMATE CHANGE-CRAIG HASKIN LOCAL AGENDA 21, GRACE STEAD	SUSAN DITTKE (CLEANER PRODUCTION PROJECTS)	PUBLISHED DATA ON ENERGY
PROVINCE OF WESTERN CAPE	TRAVERSAL ISSUES DEPARTMENT- MARK GORDON		
ENERGY RESEARCH CENTER- UNIVERSITY OF CAPE TOWN	ENERGY POLICIES- GISELA PRAAD ENERGY EFFICIENCY PROJECTS- DENIS VAN ES		STATE OF ENERGY REPORT 2004
NGO- SUSTAINABLE ENERGY AFRICA	SARAH WARD, ENERGY EFFICIENCY PROJECTS IN BUILDINGS LEILHA MOHAMMED, ENERGY STRATEGIES		ENERGY EFFICIENCY SOURCE BOOK
NGO- ENVIRONMENTAL JUSTICE NETWORK			
ESCO- NOVA LIGHTING	CECIL WATTS, LIGHTING PROJECTS		
ENVIRONMENTAL CONSULTANTS	DAVID CHOWN, ENERGY CONSULTANT BECO, LOIS COETZEE NIELS BIRNANRD, ENVIRONMENTAL MANAGEMENT SYSTEM CONSULTANT		

4.5.1 Partnership models: The biodiversity partnership, Local Agenda 21

Other partnerships have been developed in Western Cape recently, the biodiversity and wine initiative on the conservation of the unique native species of the area where the grapes are growing and the local agenda 21 partnership for the promotion of sustainable practices. These partnerships might be a source of inspiration and synergies.

The first one can be interesting to look at for the marketing characteristics of the initiative and the simple and working coordination structure. The time taken to get the project going, was approximately two months of interviews and workshops to determine and ratify the strategy for the project. Only one person was coordinating the project, meeting with people, doing research, holding workshops and producing documents.

The next two months were spent putting together funding proposal and preparing promotional and launch materials. Then a technical working group was established to draft guidelines and a marketing workgroup created to get biodiversity into the brand of South African wine and to look at a biodiversity wine route. Each group meets every two months and the coordinator has taken care of the groundwork in-between the meetings. Now it is almost eight months since the initiative was taken up, and a large proportion of the time has been dedicated to fund raising.

Local Agenda 21 is instead a municipal sponsored initiative to invite business people around a table to discuss together, and with other stakeholders, how to make Cape Town a more sustainable place. They have been involved in the decision of the strategy and in the implementation plan. The project has been coordinated by a group of people, belongings to different municipal departments, so the coordination body has not been as flexible as the one in the biodiversity initiatives.

4.5.2 The motivations, the incentives and the pressure (drivers and barriers)

The stakeholder analysis has also identified conflicts of interests (actual or potential) which might influence the level of risk of the agreement. A main conflict might be caused by the fact that the Municipality of Cape Town is at the same time the vendor of electricity and the promoter of energy efficiency measures as Eskom is the main electricity supply of the country and the funding body for demand side management projects. Whether a more energy efficient economy can lead to less expensive electricity, that depends also on the price imposed by the national energy regulator. The role of regulator on energy is blurring among different bodies as described before. The interviews have revealed that this plurality of bodies creates confusion. It is not clear who has the power to plan energy efficiency policies or from whom to demand support for energy efficiency projects. The need of a model "one office all services" seems emerging.

Through the interviews positive relations have been identified on which it is possible to build. For example, the relation between the energy research center, some firms and Eskom on one side and the relation between ESCO Nova Lighting, some retailers and Eskom on the other side. Also energy and environmental consultants are helping some business realities to invest in energy efficiency technologies. It would be interesting to group all the professionals and help them to create new ESCOs in Western Cape, involving also the ERC and the Chamber

of Commerce for financial and expert support. To create an ESCOs association, as the one created in the United States, devoted to promote energy services activities and to harmonized energy auditing and monitoring methods, can be very interesting to do. Another positive partnership has been developed between the Municipality of Cape Town and the wind power producers in Darling.

Others factors that might limit the scope of the agreement or might influence the design of participation is the resistance to change of some officials of the local institutions and their reluctance of becoming partners with the private sectors. They have to be exposed to environmental management system thinking and understand and learn about energy efficiency potentials becoming ambassadors of a new business model that pose much more attention to the consumption of energy and its environmental impacts. The launch of a broad debate on energy efficiency with monthly meetings and working committees with experts can be a viable learning opportunity to overcome the resistance to cooperate with the private sector on policy issues.

I have observed a strong motivation by some business managers about energy efficiency related projects. They said, they expect returns in a broad definition including savings, funding opportunities to change technologies, better image and carbon credits. However, a shock treatment with local newspapers and radio focusing of the issue has been considered essential to create the interest and the critical mass to develop a private public partnership on energy efficiency.

4.5.3 The resources

The resources in Western Cape regarding energy efficiency are scarce and are limited to a small group of consultants, an even smaller group of business people, NGO members and academics working with the energy research center. This group has to be supported and enlarged, creating an enabling environment for other professionals to join the group and promote energy efficiency projects. A lack of human, financial and knowledge resources will lead to a partnership with poor communication strategy, poor transparency and limited achievements, if any. Energy audits are not a common practice in the area, very few companies like Old Mutual has hired energy consultants, in this case from England, to conduct an energy audit. Therefore a training and educational phase seems extremely important to create a collective understanding of the potentials, to elaborate the motivations to put in place new energy efficiency projects and to offer to the area of Western Cape a practical opportunity to exploit the saving and learning opportunities in energy efficiency. There is the chance to become an innovation area in energy management, both for the private sector and the public one (buildings and hospitals).

4.5.4 The information/ burden sharing schemes

The persons interviewed have been shown three types of schemes representing the relation between the regulator and the private sector with and without an industry association. According to a previous study, analyzing these schemes the information efficiency and indirectly the cost efficiency of a voluntary agreement can be assessed. [114] In this exploratory analysis the achievement has been a discussion of the information and burden sharing alternatives and a selection of effective forms to be suggested for the voluntary agreement on energy efficiency. These schemes, proposed by the project NEAPOL, can be used as indirect indicators to evaluate information efficiency and cost effectiveness. It is usual that an

[114] NEAPOL see M. De Clercq. (2002). *Negotiating Environmental Agreements in Europe*. Edward Elgar, Uk. p.38-

agreement only contain a collective target. This collective obligation must be translated into individual targets during other negotiations with participating firms.

The first scheme is called inter-firm bargaining, the firms negotiate among themselves a target and then they propose it to the regulator/s. It is shown in the next figure.

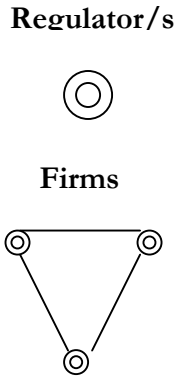

Figure 4-6 The inter-firm scheme Type 1

The second model is called bilateral bargaining between each firm and the industrial organization. In this case the industrial association coordinates the discussion around the content of the agreement and the information flow towards the single firms.

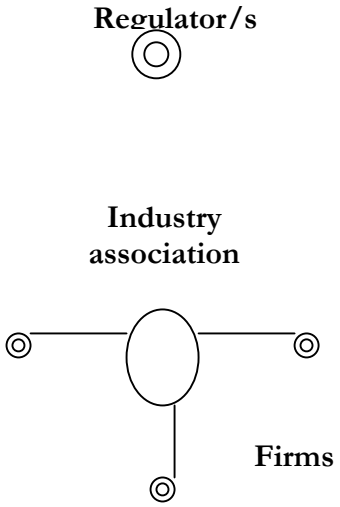

Figure 4-7 The bilateral bargaining between each firm and the industrial organization Type 2

The third scheme is called bilateral bargaining between each firm and the regulator. It is characterized by a situation of symmetric information.

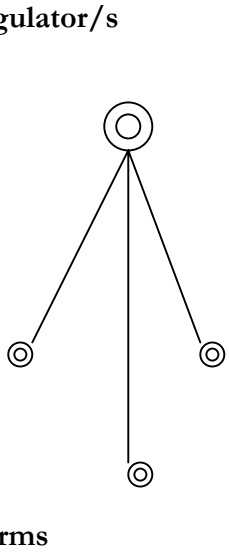

Figure 4-8 The bilateral bargaining between each firm and the regulator Type 3

A coordinate solution is often proposed by the government to the industry sector. A collective voluntary target is determined in the first stage during negotiation with the industrial association or a coordination body. In a second phase single firms "choose" their optimal allocation target (level of supply). Theoretically cost minimization would be possible, because the industry as whole has an incentive to select an allocation of efforts which minimizes the sum of these costs. However, this implies that some firms will have to bear a higher individual target. A solution to this problem may be a monetary transfer between firms allowing solution of the distributive conflicts or a plan of investments that prioritizes short-term payback time investments and utilizes the savings to refinance other investments in the long term. A common energy efficiency fund might be created to give financial support to capital-intensive projects.

Even assuming that through voluntary action firms can reach a given objective with lower costs than in the case when they are forced by regulatory measures, three other obstacles may emerge: the free riding problems, strategic behaviors and a private agenda of the regulator. According to the bargaining theory, the total exploitation of the "gain from trade" between the regulator and the firms is hindered by high information and transaction costs. Therefore the allocative efficiency of bargaining is threatened by high information and transaction costs. There is a trade-off between information sharing and strategic behaviors of single actors. A powerful industrial association is always efficient (type 2 scheme) because it provides two advantages: it saves communication costs through the polarization of communication structure and it saves enquiry costs through the monopolistic completion of enquiry. If an industry association is not available or it has no leadership, a strong involvement of the regulator is efficient in the context of asymmetric information because it saves information costs (type 3 scheme). When the attitude of the firm to collective learning is high, the firms can act as a democratic group and negotiate with the regulator without an intermediary (type 1 scheme).

It is interesting to focus the analysis on factors that impede the achievements of cost minimization related to information collection and processing costs looking at the reason for cost effectiveness. An intense collective learning improves information of firms and allows them to implement their target at lower cost. The actors interviewed express their opinion on

the parties that they foresee possibly implementing the agreement. Regarding the role of the regulator, they recognize Eskom more easily than the Department of Minerals and Energy, the National Energy Regulator, the Municipality of Cape Town and the Province of Western Cape. This plurality of regulators, that the actors are not always aware of, has to communicate a unique strategy for energy efficiency, and they have to work together to engage the private sector to invest and learn about energy management. Regarding the industry association, their potential role varies from sector to sector. Whether the association is in place and it has leadership, the role of the coordination body can be given to it. If not, a new body has to be created. The function can be assigned to a small group of people representing a different interest, like a member of NGO, a member of the local authorities and a member of the industry sectors, or even to a single person. The Chamber of Commerce has been mentioned as a possible actor for the role of coordinator of the initiatives. It is important to create continuity. The coordination body has to last, as well as all the representative of the other parties, for the duration of the all project. Regarding the firms, both alternatives to have a sectoral agreement with a limited number of sectors or a cross sectoral agreement open to the more proactive companies are positively welcomed by the business community. The next scheme presents the model that seems more favorable for the agreement in Western Cape, however the group has to be homogeneous regarding innovative and investment capacity.

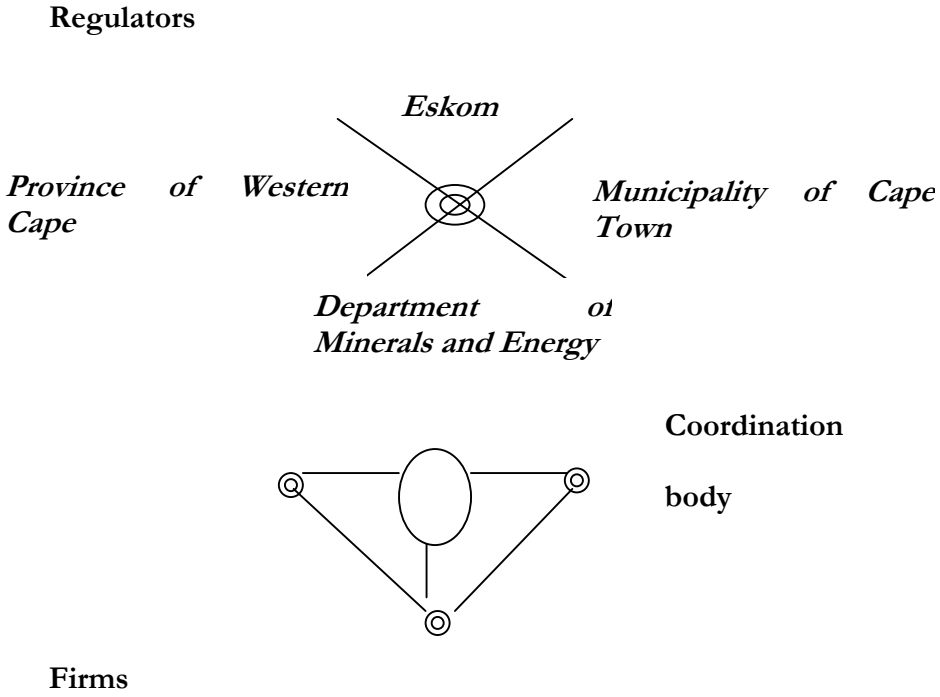

Figure 4-9 The inter-firms scheme with a coordination body

The scheme proposed by the stakeholders introduces an ad hoc body that facilitates the learning process of the companies regarding energy management and it works to minimize the cost of information and burden sharing.

Concluding this part of the analysis, some reflection will be given about the approach proposed. The schemes theorized by the project NEAPOL are still exploratory and more empirical work remains to be done about the information and transaction cost of voluntary

agreements to improve these assumptions. However, it is clear that a cooperative attitude when developed, promotes an open decision making process and it involves the business community giving them a part of responsibility in design, support and implementation policies.

Voluntary agreements have sometimes been criticized because they reduce market competition, either because they provide incentives for collusive behavior among firms, or because they set up barriers to entry for new industry, or because their implementation tends to increase market concentration. Consequently, it is important for the regulator to assess the non-environmental implications of voluntary agreements, in particular their implications for market structure to see if competition policies are sufficient to reduce the economic trade-offs.[115]

The result of another project on a group of different agreements, the CAVA[116] research, showed that voluntary agreements are favored by a situation in which industry is more concentrated and moreover the voluntary agreement itself is likely to increase the industry concentration. Signing the agreement., industries can gain green reputation and increase their market power. In this way, they have the opportunity de facto to determine a more concentrated structure.

The effectiveness and efficiency of voluntary agreements when market is imperfectly competitive are not yet fully explored. This problem in not specific to voluntary agreements; all environmental policy instruments are scarcely analyzed within imperfectly competitive frameworks despite the fact that, as shown by Carraro, Buchanan[117] and others, the results proved under the assumption of perfect competition are quite different.

In the case the Province of Western Cape will opt for a cross sectoral agreement, open to innovators, the risk of creating more concentrated market power will be counterbalanced by the benefits of introducing new energy efficiency practices and new technologies in all the sectors involved. To what extent the fact that the agreement is cross-sectoral may limit the negative effects and enhance the positive ones is difficult to assess. There is, however, the watchdog function of NGOs and the government.

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[115] R. Brau, C. Carraro. (1998). *Voluntary Approaches, Market Structure and Competition*. FEEM paper 53.99

[116] Concerted Action on Voluntary Approaches (CAVA) is a research network started in 1998 and culminated in 2001 with the publication of a Policy Handbook.

[117] J.M. Buchanan. (1969). External Diseconomies, corrective taxes and Market Structure. American Economic Review, 59. p.45-69 in R .Brau, C. Carraro. (1998). *Voluntary Approaches, Market Structure and Competition*. FEEM paper 53.99 p. 25

4.6 How to create a win-win situation: ideas for implementation of voluntary initiatives in the Province of Cape Town

Summing all the conditions that can eventually lead to a negotiated agreement on energy efficiency in the Province of Western Cape, an Energy efficiency manifesto is presented in this paragraph.

WESTERN CAPE LEADS ON ENERGY EFFICIENCY

Once there is a political commitment to make Western Cape a more energy efficient Province, a number of measures can be promoted, one of them being a voluntary agreement on energy efficiency. Below is presented a possible objective of the agreement, the rationale and the major problems to overcome that emerged from the exploratory analysis conducted.

OBJECTIVE

1. Reach consensus on the global objective of energy efficiency

2. Enhance social and economic acceptability of policy measures regarding energy efficiency

3. Pass the economic benefit of improved energy efficiency from individuals to the whole society

RATIONALE

The rationale proposed is based on a two-steps approach that includes an energy audit as precondition to enter the negotiation for a cross-sectoral voluntary agreement on energy efficiency. The audit carried out by an ESCO company or a energy consultant explores the potential for energy savings. Then the company has to elaborate an action plan and enter the negotiation with the other parties. The plan has to contain a proposed target on energy efficiency. Then the parties agree to reach a consensus on a collective target in an established time frame. The appointed coordination body has to make sure that parties are supported consistently in all the steps, and informed on the funding and financial opportunities. The parties have also to decide about complementary measures for behavioral changes and energy budgets. Currently there is the possibility to benefit[118] from the ESKOM demand side management program that provides and covers the expense for energy audits to raise awareness. Two others financial incentives available to help to undertake audits and to overcome long pay-back times of investment for more energy efficient production systems derive from the clean development mechanism and demand side management programs.

The voluntary agreement can promote push and pull measures at the same time. Ménanteau studied that market push with standards of minimum energy performance is necessary to force manufacturers to improve performance up to a threshold, but it is not an incentive beyond. Labels are incentives for manufactures to improve further performances since consumers are pulled by labels. On one hand, the agreement can help the firms to create minimum energy performance standards within the sector and it can facilitate the bench-marking across the sector. On the other hand, the agreement being a collective effort and a learning opportunity can motivate the companies to improve further their energy performance. The agreement

[118] The audits are paid by Eskom when the company fulfills the requirements for access the demand side management funding opportunities.

might also pull consumers to ask more energy responsible behaviors from the companies they deal with since it brings up the issue of environmental and social impacts of energy consumption to a broad public. Within the negotiation process of the agreement the regulators can offer subsidies scheme in order to support energy efficiency. There is the possibility to sustain the investment on energy audits and energy efficiency measures both through private and public funds. The ideal win-win situation is an agreement designed so that it has certain aims:

- Lowering the administrative costs of the energy efficiency measures
- Creating appropriate supply and skill conditions for energy efficient devices, technologies and behaviors
- Maximizing the effectiveness of the measures
- Reaching qualitative and quantitative targets
- Involving consumers in the choice of energy efficiency commitment

PROBLEMS TO OVERCOME

The main problem to overcome is the initial lack of ESCO companies and energy auditors. Later there will be the need to avoid technical energy efficiency gains to be offset by energy intensive behaviors and practices.

5 Conclusions and Recommendations

As mentioned before, various institutional conditions (the context) and procedural requirements (the content) can limit the effectiveness of voluntary initiatives.[119] The opportunity to explore the conditions ex-ante to promote a voluntary agreement in a developing country, gives this research a privileged point of view to contribute to the understanding of the barriers and potential to use voluntary agreements in this context. More particularly, the research focus on the challenge to use voluntary agreements at local level, in the Province of Western Cape in South Africa, in order to promote the national strategy on energy efficiency, helping the business sectors to commit themselves towards an energy efficiency target.

As the VAIE study[120] reveals, the private side is not prepared to deviate from a business as usual scenario unless substantial bargaining chips are offered by the government side. The government should be able to provide a substantial economic reward, for example in the form of tax reduction for participating companies or in the form of subsidy schemes supporting innovation. In some cases, the incentives used by the government are less tangible and of a more political nature like a formalized promise to refrain from other regulation or environmental taxes. These conclusions might have to be slightly modified in the context of a developing country. In some cases voluntary approaches have been used there just to reach a level of consistency with existing regulation. There are potentials to use them more efficiently; promoting a cooperative partnership that is *not intended to be a substitute of regulation*. Voluntary agreements can act where a regulation is not define yet, preparing society to the transition towards a regulative framework; or they can follow up a regulation that requires to be implemented; or they can intervene where regulation is not possible for lack of knowledge, human and financial resources. The negotiation approach can provide the opportunity to create sector dialogue with the aim of identifying long-term environmental issues that might have an impact on the international competitiveness of the sector and at the same time harm the social and natural environment locally.

Policy making is a collaborative art that should create shared objectives, collective learning and a sense of responsibility for the well being of the society. Voluntary initiatives have been explored in this research to contribute to the understanding of the potentials to use them in developing countries to enhance a participative governance and environmental awareness. The exploratory analysis conducted leads to the conclusion that voluntary approaches are an opportunity not fully assessed. Through the analysis of the four aspects of the socio-economic context (the political tradition, the existence of an alternative legal instrument, the structure of the sectors and the market structure in relation to competitiveness and consumers pressure) we observed that there are positive conditions for good performance of a negotiated agreement on energy efficiency in the Province of Western Cape. None of the aspects of the socio-economic context is totally negative: most of them are supportive of a cooperative approach or at least ready to be developed. These supportive conditions have to be considered even more optimistically taking into consideration the fact that a previous comparative analysis[121] determined that not all the aspects of the socio-economic context have to be favorable for the fulfillment of a voluntary agreement. The absence of a good policy climate,

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[119] ECOTEC. (1999) Business Voluntary Initiatives to address Climate Change. p.V

[120] Voluntary Agreement, Implementation and Efficiency (VAIE) study has analyzed energy efficiency agreements for manufacturing companies in five EU member states: Denmark, France, Sweden, Germany and the Netherlands.

[121] NEAPOL project. Available on line at http://fetew.rug.ac.be/neapol/Index.htm [12 july]

for example, can be outweighed by the use of a strong and credible alternative instrument. An alternative instrument, on the other hand, might not be necessary if the private parties feel that there is a certain degree of market pressure (from consumers or competitors) to succeed in the agreement. The disadvantage of a very heterogeneous sector with very different parties can be minimized by the imposition of a strong alternative instrument, making the incentive for these different parties the same and stimulating cooperation between them. There might be no need for an alternative instrument or market pressure, if the private parties and the policy makers already have a very good relation, and if they are already cooperating among each others.

In relation to the case study, some activities on energy issues are being developed by a number of actors. The local authorities are new on the area of energy policies, and they are investing time and energy to understand how to develop an energy strategy. They have to cope with a new role of promoting energy efficiency in the private sector together with their representatives.

There are some key aspects that can help the actions of single (companies, Eskom) or collective actors (local authorities, NGOs, local communities, Chamber of Commerce, Industry Associations) to become coordinated and organized around a common object and to be able to plan action towards a long-term target. Once the major actors to be involved in the negotiation are decided and the parties are committed to work to promote energy efficiency, the voluntary environmental agreement has to be explained as a tool. Special attention has to be dedicated to the communication of the potential of the instrument in a weak regulatory environment. NGOs and officials that have never explored how to enhance environmentally sound industrial practice trough voluntary initiatives, have to become truly sponsors. Once the potentials of a cooperative approach are metabolized, the parties have to become aware of the link between energy inefficiency and poverty. Knowledge about energy management and energy efficiency technologies can be spread cost-effectively through energy service companies. When the area is new on energy services, it is important to facilitate the creation of this kind of business through training sessions. This phase can become an important base to initiate a fruitful partnership between academics, energy researchers and NGOs working on energy issues. The effort to bring ESCOs companies to the area has to be supported financially and politically. Some direct incentives can come from information and technical assistance. Eskom can play an important financial role in the initiative, providing assistance to the new ESCOs. Demand side management projects are already covering fifty per cent of the investment cost of energy saving technologies for companies that have decided to work on energy management. When a capacity on energy audits is developed, then a wide dialogue with industry can be launched successfully. Especially companies that are already doing efforts to promote energy efficiency can be easily helped to commit themselves to a long term target with the local authorities and in this way gain visibility for their efforts.

The negotiation process where the industries are invited to join the decision making process can be organized using a flexible coordination structure. A body dedicated to the process has to be appointed by the parties. The model "one person all service" can overcome the confusion created by the plurality of regulators involved in energy related policies. It is extremely important that the uncertain regulatory environment does not obstacle the negotiation process. It has to be assessed in advance and the decision to use a voluntary approach has to take into consideration the regulatory sticks that might be used. The agreement has to be designed following the specific conditions of the regulatory environment, giving more space to non-regulatory gains in the case of a weak legislative context.

Key elements for the success of voluntary environmental agreements on energy efficiency in Western Cape

Making the negotiation process dynamic:

1. Explain voluntary environmental agreements as participative policy tool to ngo's and officials

2. Create and involve energy service companies and consultants (diffusion of knowledge on energy optimization and saving. Involve NGOs and universities in the training of new ESCOs companies

3. Use the demand side management and the clean development mechanism to support the companies to set long-term targets on energy efficiency

4. Stimulate a dialogue with industry on energy

5. Help companies that are already doing something and are willing to be rewarded to have a long term target and use the savings for future investments

Making the process working

6. One person all services model

7. A dedicate body to the process (NGOs, international or private funded project, Chamber of Commerce)

8. Recognize uncertainty about future regulation and/or enforcement

Developing countries are particularly new to the usage of voluntary agreements. It is important that their governments become open to the possibility to take advantage of voluntary initiatives. Creating awareness on the political tools of cooperative governance itself is challenging in countries where democratic practices are still in an embryonic phase. It is however extremely helpful to learn about the possibility to have not only the government but other bodies (international projects, NGOs) as promoter of voluntary initiatives that help the business sectors to take responsibilities towards social and environmental impacts of their processes and way of conducting their business. Especially multinationals that decide to produce in developing countries have to be aware that decision comport also social and environmental responsibilities.

There are companies that are ready to have an environmental management system in place, or that are improving their technologies towards cleaner and more efficient ones. These are however so far isolated actions, limited in time, scope and effects. There is the need to reflect on long-term visions. It is important to bring every efforts and actions into a long-term vision. A way, not fully explored yet, to do so seem to be to understand in every specific context how far can a voluntary agreement contribute to this shift.

Limited budget and human resources in developing countries imply that limited time can be dedicated for the negotiations and to find sponsors. This situation might force industries to organize themselves in associations for the promotion of the agreement (as it has happened with the packaging industry in EU). Every voluntary initiative is a delicate and unique process involving different actors and interests. It is strategic to have effective communication among them. The government has to know what it is prepared to offer and communicate it

effectively. The process itself can become a motor to develop a resources base within the public structure, enhancing cooperation among different departments and asking them to rethink their role as promoter of innovative solutions in policies and practices for the protection of the environment. Voluntary agreements create partnerships: bridges between different players, different sectors, different regions and different countries. Developed countries and international projects can devote resources to promote voluntary initiatives in developing countries, supporting them in organizing policy making processes with a larger numbers of actors that take responsibilities for the well-being of the society.

Key elements for the success of voluntary environmental agreements in developing countries

Developing countries

1. Be open to the possibility to have the government or other bodies as promoter of the initiatives (CDM projects, US chemical alliance), create awareness on the tool itself

2. How far can we go with a voluntary agreement? The importance of bring the efforts/actions into a long term vision

3. Realize that limited budget requires to determine a time limit for agree on a target and/or find sponsors

4. Effective communication: the government has to know what it is prepared to offer and communicate it effectively

5. Development of the resource base; it can be supported at all level (local, national, international) by both private and public institutions

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Abbreviations

BEE Black Economic Empowerment

BIAC Business and Industry Advisory Committee

CABLA Capacity Building, Leadership and Action

CAIA Chemicals and Allied Industries Associations

CAVA Concerted Action on Voluntary Approaches

CSD Commission for Sustainable Development

CDM Clean Development Mechanism

CONNEPP Consultative National Environmental Policy Process

DANIDA Danish International Development Agency

DEAT Department of Environment And Tourism

DME Department of Minerals and Energy

DMS Demand Side Management

EEA European Environmental Agency

EMCA Environmental Management Cooperation Agreement

EPA Environmental Protection Agency

ERC Energy Research Center

ESCO Energy Service Company

EU European Union

FAO Food and Agriculture Organization

GDP Gross Domestic Product

IEUG Intensive Energy Users Group

ISO International Standard Organization

IPW Integrated Production of Wine

KWV The wine and Spirit Board of South Africa

LTA Long Term Agreement

MEC Member of Executive Council

NEAPOL Negotiated Environmental Agreement

NEMA National Environmental Management Act

NER National Energy Regulator

NGO Non Governmental Organization

OECD Organization for Economic Cooperation and Development

RMEF Refinery Managers Environmental Forum

SAB South African Brewery

SEA Sustainable Energy Africa

SEED Sustainable Energy and Development in South Africa

TUAC Trade Union Advisory Committee

UCT University of Cape Town

UNEP United Nations Environmental Program

UNDESA United Nations Department of Economic and Social Affairs

UNDP United Nations Development Program

UN United Nations

US United States

VAIA Voluntary Agreement, Implementation and Efficiency

WEC World Energy Council

WTO World Trade Organization

WWF World Wild Found

Appendix

THE QUESTIONNAIRE

This is a questionnaire out I prepared to interview stakeholders that have been selected as relevant to understand the potentials for developing a voluntary agreement on energy efficiency in the Province of Western Cape. The interview is intended to be semi-structured, in order to give the stakeholders the possibility to express as much as possible their views freely. So not all the questions need to be answered. Please contact me either by phone or by e-mail if you prefer to discuss the issue over the phone or if you need any further explanation.

YOUR COMPANY/ORGANISATION ……..

1. Can you describe briefly your business? Which sector does your organization belong to and which is the market share?

2. Which sources of energy are currently used by your company and for which purpose? (fuel type: natural gas, coal, electricity, etc; major energy devices: air compressor, heat pump, boiler, etc)

3. Which is the percentage of your energy cost in comparison with the other "fixed" costs? Please give an estimation if you do not have the data available

ENERGY EFFICIENCY

a) Position of the issue

1. How does your organization/company deal with energy management?

2. Why is your organization interested in energy efficiency? (Environmental and /or other reasons)

3. What has your organization done to achieve a reduction of energy consumption per unit of production (service, square meter)?

4. Can you help me to highlight the linkages between energy efficiency activities and various policy areas / the company strategy, and identify synergies? *Or is energy management an integral part of your strategic plan and the way you do business?*

5. Have you been involves in some energy auditing, energy demand side project, peak load shift project with Escos (Energy service companies)/Eskom? If not why?

6. If there will in the near future a greater need to reduce energy consumption/ enhance energy efficiency, how would you suggest to proceed / how can we achieve it? The question can be pose at different levels:

- at company level

- at industry sector level

- at the industry/society level

b) Measures for energy efficiency

Energy efficiency can be seen as part of economic efficiency. Do you know which factors have a direct impact on your energy consumption?

Please go through the list below and check the energy efficiency actions that you think are interesting to look at for your company/organization.

Energy efficiency measure can be grouped into four categories:

1. Process efficiency
2. Non-process efficiency
3. Energy efficient product development
4. Renewable energy

The category **Process efficiency** is subdivided in:

- Energy management and good house keeping,
- Process energy conservation,
- Energy conservation in utilities and buildings
- Strategic projects.

The category **Non-process efficiency** is subdivided in:

- Chain management and distribution, including transport and logistics
- Administration
- Marketing
- Offices

The category **Energy efficient product development** is subdivided in:

- Sustainable products
- Optimization of transport, logistics and chain management
- Sustainable industrial areas

They comprise improvement of energy efficiency in the fields of:

- Optimization of function (LCA)
- Dematerialization
- Improvement of process efficiency outside the site

- Optimization of distribution

- Decrease of energy while using the product

- Optimization of product life

- Optimization of (partial) removal of the product

- Optimization of (partial) reuse of the product

Renewable energy is considered a separate target area. It includes:

- Purchase of renewable energy

- Hydropower

- Wind energy

- Thermal solar energy

- Photovoltaic solar energy

- Passive solar energy

- Heat and cold storage

- Geothermal heat

- Heat pumps

- Energy from waste and biomass

VOLUNTARY ENVIRONMENTAL AGREEMENTS

A voluntary agreement is a negotiation process between the public authorities and the private sector to promote voluntary actions in the field of the environment. The aim is to reach a shared objective between the parties involved. The decision to join the process is voluntary while the commitments derived by the signature of the agreements are not.

It can be defined also as a business contract with the government regulating reduction in environmental pollutions/effects over a certain period of time.

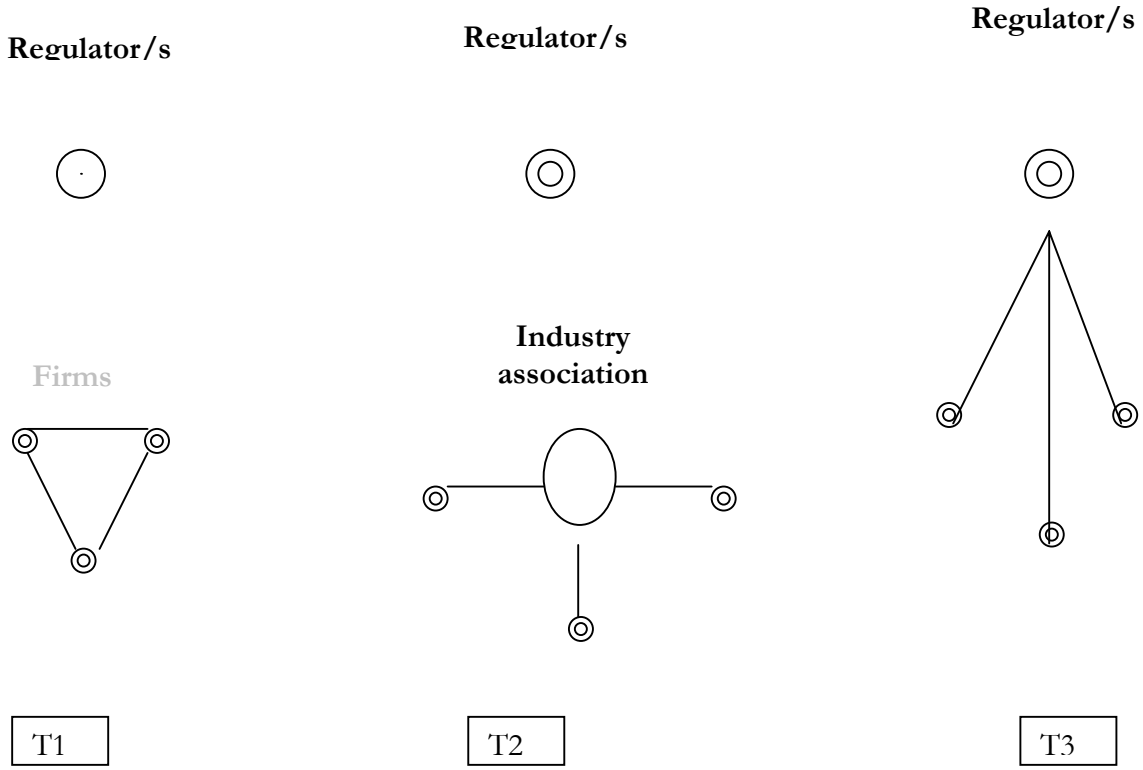
1. Do you think that industries can commit themselves to energy efficiency voluntary? Why?

2. If the local government of Cape Town wants to be committed on the issue of energy efficiency, could a voluntary agreement be reached on effecting reduction in energy efficiency?

3. How would you suggest to initiate a broad debate on energy efficiency with the industry sectors?

4. Which kind of actions/ collaboration between different stakeholders do you foresee? Please name the main ones.

5. Which type of collaborative approach do you see and which one would you suggest to adopt to promote energy saving attitudes? Please mark one or more options



T1 : Inter-firm scheme

T2: The bilateral bargaining between each firm and the industrial organization

T3: The bilateral bargaining between each firm and the regulator

Asymmetric information T2= T3 < T1 Shared uncertainty T2<T1<T3

(How will the burden-sharing be achieved? How will free-riding be dealt with? How are any competitive distortions addressed?)

A National strategy on energy efficiency has been released by the National government in spring this year.

6. Which are the advantages that you can expect to accrue from a voluntary agreement on energy efficiency that help the industry to achieve the 12% target decide by the national strategy?

7. Where do you see a win-win situation? Which potentials of saving do you see? (flexibility, cost effectiveness)

8. Which factors will positively and negatively influence the performance on the voluntary agreement?

9. How do you see the possibility to integrate demand side management projects and peak load shift projects promoted nowadays by Eskom into a more comprehensive energy efficiency action plan? Would a voluntary agreements help in doing that?

INNOVATION

1. The negotiation process to implement a voluntary agreement can promote the coordination of the efforts of different stakeholders in managing more efficiently energy consumption and can also help the public authorities to pool knowledge, spread new technologies and foster innovative solutions. Can you please position along the transversal line the voluntary agreement that you have in mind. Explain briefly how it would look like.

IMPLEMENTATION INNOVATION

Competition	**Learning, cooperation**
Free-riders	**Fast learners**
Information asymmetries.	**Shared uncertainties**
BAT	**Technological progress**
	Innovation

2. The potential for leaning is a feature that distinguishes negotiated agreements from the other policy instruments. What do you think will be the learn objective for a voluntary agreement on energy efficiency?

POLICY OBJECTIVE

1. How does the policy on energy efficiency interact with the other environmental strategies? Are they coordinated and self-supporting each other?

2. Which kind of public-private partnerships have been developed and have been successful? Why?

3. Can you help me identify possible synergies and linkages of energy efficiency target with other projects promoted by your organization?

4. How do you think the restructuring of the electricity supply (RED) industry will affect the energy efficiency policy in the coming years?

Thanks for your time and helpfulness. Your contribution is of great importance for the understanding of the potentials to use private-public partnerships in the area of Cape Town

and more in general in the context of developing countries, where the regulatory measures are often difficult to implement. Best regards, Dania Cristofaro