

GOVERNMENTAL STRATEGY REGARDING CLIMATE CHANGES:

REDUCE GHG PRODUCED BY SME

TO ENCOURAGE SOCIOECONOMIC ADAPTATION

Paper

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INTRODUCTION

A CHANGE IN QUEBEC'S POLICY TOWARD A GREEN ECONOMY AND A RESILIENT SOCIETY

Climate changes are there for a long time. The same is true for the debates concerning their causes and impacts. Take for instance the discussion initiated in the Wall Street Journal in January 2012 by 16 scientists calling people not to be preoccupied by climate change! A call that was immediately retaliated by 38 climatologists to reaffirm the importance to invest in a carbon-constrained economy, so to avoid the worst of the effects of climate changes and insure economical growth¹.

This transition towards a green economy will not be carried out without clash and resistance. At Gedden, we believe that it is time to act, despite the obstacles spread by climate skeptics. We also applaud the change in policy towards a carbon-constrained economy taken by Quebec in its Action Plan on Climate Change (APCC). A plan based on both scientific reports and solid studies. The Quebec society has to act now to face the social and economical issues associated with climate changes, as forecasted by GEIC and the Ouranos Consortium by the year 2050 in Quebec: increases in temperature of up to 6,5°, increases in rainfall precipitations of up to 29,4%², increasingly frequent severe weather events and disruption of several more vulnerable sectors of the economy. We can easily figure out the social impacts arising from such changes on the life-styles of Quebec's population.

We do recognize however that MDDEP's objective to reduce Quebec's GHG emissions by 20% below 1990 levels by 2020 is very ambitious. Our company supports, without reserve, the APCC strategies to reduce GHG emissions, while working on social adaptation strategies to face climate changes.

¹ Ref. : <http://effetsdeterre.fr/2012/02/01/pour-un-avis-sur-le-climat-consultez-les-climatologues/>

² Document 1 : "Stratégie gouvernementale d'adaptation aux changements climatiques", p.4, MDDEP, fév. 2012

We are presenting this paper in the spirit to improve and to realize the APCC. It contains our analysis of the 3 documents proposed for consultation, our strategic recommendations and a brief presentation of our contribution to meet the challenge of climate changes that constitutes for us, an opportunity for economic, social and technologic development.

1. ADAPTATION STRATEGY (doc. #1)

TRANSFORM THE CRISIS INTO A SUSTAINABLE DEVELOPMENT SPRINGBOARD

Gedden's Sustainable Community Solution

Gedden's Sustainable Community Solution sets out to target GHG emission reductions from low-emitters from all sectors (manufacturing, commercial and institutional) (emissions <25 KTM/year), that emit close to 70% of Quebec GHG and for whom reduction is cost-prohibitive. Gedden offers to low-emitters the conversion into cash of their GHG reduction measures through the stimulation and the aggregation of their efforts with those of other low-emitters and to sell them on the carbon market (we will emphasize this point at item 4).

By implementing its Sustainable Community Solution, Gedden aims at reducing GHG emissions of 4 MTM by 2020, representing 26% of the APCC objective (15MTM). It is an innovative and workable solution that contributes to government objectives for 2020. It is backed up by a new methodology that is recognized by an international standard. Moreover, it represents reductions that are more important than other avenues explored.

A congruent and additional contribution

Our contribution fits perfectly with the strategic orientations proposed by the MDDEP. So our Sustainable Community Solution aims not only to "preserve the economical prosperity" (orientation #6), but also to take the climate changes issue as an opportunity to develop our solution and to change attitudes positively: changes facing adversity, in the way to do business, while protecting the environment.

In short, climate change issues are a springboard toward sustainable development based on a less fossil-fuel dependent economy, a behavioral adaptiveness of our society, the introduction and the development of green technologies as well as the cooperation with other low emitters that are also confronted with the same challenges and without many resources available. This is where Gedden's Solution meets objective #12 : " to provide significant support to vulnerable economies", and #13 : "to favour innovation and to take a hold on the economic opportunities associated with climate changes".

This is the age of sluggishness and cynicism. So, it is important to give a positive signal to society: The challenge is huge, but we do have the possibility to take it up, so we can develop accordingly, if we tackle it now systematically and with creativity.

That signal is there in the documents that have been produced. However, it should be examined more thoroughly starting by informing the population of exactly what is going on concerning the scientific forecasts and the economical impacts associated with the measures to be implemented in our lifestyle and quality of life. Society needs a wakeup call to stimulate involvement through action. A climate-state of shock. Especially when, at the same time, we propose measures to meet this challenge. Thus, we hope to stimulate this "social resilience" often alluded to by MDDEP's works. And leave a generational legacy that takes sustainable development into account.

Recommendations

1. To offer to the Quebec economy a group of complementary measures, extremely articulated and adapted to the Quebec reality, including : regulation, taxation, fiscal incentives and financial compensations and rewards.
2. To stimulate, support and encourage GHG emission reduction efforts from thousands to hundreds of thousands of low emitters, including citizens, while democratizing access to carbon markets thus integrating carbon costs into our economy.
3. To launch an important public opinion campaign associated with climate changes and the social and personal means required to face it.
4. To implement structuring projects allowing the active involvement and participation, through a domino effect, of tens of thousands of low emitters in GHG emission reductions.

These measured reduction efforts shall be rewarded economically, according to the nature of the efforts. There is, therefore, a need for a carbon signal. The implementation of the proper technical training programs, customized to fit low emitters in their day to day activities, will enhance their engagement in their GHG emission reduction projects.

2. OVERVIEW OF THE STRUGGLE AGAINST CLIMATE CHANGES

GLOBAL ISSUES, GLOBAL SOLUTION (doc. 2)

The Kyoto Protocol has had the merit of bringing climate change issues to the awareness to the public. Despite the controversy created by the withdrawals of Canada, Russia and Japan, the Durban Conference on Climate Change held in South Africa last December put forward the message calling up for a general mobilization for the signature of a global agreement by 2015 towards binding targets for all countries and not only countries from Appendix I of the Kyoto Protocol, but also the recalcitrant developing countries.

In parallel to the Kyoto discussions, there is an emergence of several regional markets in the Pacific region: Australia, New Zealand, Japan, China (with 7 regional markets forecasted for 2013), India, South Korea, British Columbia, California and Chile. This shows the willingness of the most important worldwide economic regions to migrate towards a carbon-constrained economy. The majority of these markets are offering measures encouraging the use of offset credits, that is to say, measured and certified GHG reductions from non regulated entities, originating from low emitters.

We encourage the Quebec government to recover, with reinforcement, the UNEP principle that considers the fight against climate change as an opportunity for development, rather than a break on economic growth. Quebec now has the possibility to make new green economy the principal agent for technological, social and economic innovation. Sustainable development can be exiting and creates collective wealth!

To do so, we must dare to move, to innovate and to get off the beaten track. The climate change issues are global. The solutions must also be global. Quebec has already taken the lead by joining the North American Alliance of the Western Climate Initiative (WCI), where California is particularly active.

This type of alliance should, in our point of view, duplicate itself at the international level. Because Quebec is a low GHG emitter per capita, its capacity to reduce GHG's and to create carbon sinks is limited. Considering that 70% of the GHG emissions are coming from low emitters and that Quebec has the weakest GHG emission ratio per capita, it will be costly for the government to manage without carbon credits from low emitters.


In practical terms, as previously mentioned, the exchange permits and offset carbon credits associated with GHG reductions are still active in regional markets. It is important to maximize our knowhow by adapting ourselves to market requirements and particularities while preparing, in medium term, our global market integration.

Quebec needs to develop an approach that ties up with regulated and voluntary markets, while considering the constraint of avoiding carbon credit double accounting. The truth is that those credits can only be considered under one jurisdiction, the one where the carbon titles have been purchased.

The future starts from there, but the market has already spread out globally and Quebec must integrate it as rapidly and harmoniously as possible. The global integration of carbon costs is inescapable. A Carbon Fund will be highly beneficial for Québec, as those implemented in other jurisdictions such as British Columbia among others.

Recommendations

5. To anticipate a proper proportioning, in the APCC 2013-2020, favouring GHG emission reductions (source) as well as the capture of carbon emissions (carbon sinks).
6. In the APCC 2013-2020, to foresee a policy forcing Quebec to compensate, to a minimum of 50%, or even 75%, its GHG reduction targets where small projects or efforts are made in the Quebec jurisdiction, before going into worldwide offset markets (or any other reduction titles), as in Australia and other markets.

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7. To anticipate a fair linkage between the emission titles granted to large emitters (through the new PEDES regulation) and the use of carbon credits on the voluntary market from efforts carried out by Quebec's low emitters. The intent here is to target a common and complementary operation of these two systems in order to achieve the target of reducing by 20% GHG emissions anticipated by Quebec in 2020.
 8. To implement a Quebec Carbon Fund, to favor projects for GHG reduction or carbon capture introduced and realized in Quebec which will give Quebec the opportunity to position itself on these regional carbon markets: Some already forecast a demand for offset credits that are external to their market.
 9. To work out on a regulatory framework along with ethical and equity rules to encourage the integration of Quebec on international GHG exchange markets.

3. THE ACTION PLAN'S VISION AND ISSUES (doc. 3)

SOCIAL ADAPTATION STARTS BY GHG REDUCTIONS

"To reduce GHG and to adapt ourselves to climate changes by stimulating green economy and social resilience": the foregoing summarizes the Quebec government's global strategy in its fight against climate changes.

We believe the best way to initiate action is, first and foremost, to tackle GHG reductions. Because they represent the source of the problem, by reducing GHG emissions, not only we are addressing this issue, but we are also building up collective trust to face this huge collective challenge. One of the direct effects of GHG emission reductions is the rise in productivity and competitiveness of Quebec companies, because it forces us to produce goods and services in a more sustainable way.

In practical terms, we are proposing to the Quebec government not to neglect, but rather prioritize the stimulation and the support for projects aiming to reduce GHG emissions for low emitters. They represent, not only the most important part of GHG emissions in Quebec ($\approx 70\%$) but they constitute the economic sector the least likely to prioritize this type of action, considering its limited size and financial capacities.

Our company has developed an innovative approach for both its methodology and unique business model to specifically respond to GHG emission reductions from low emitters. Following is a brief opening statement.

4. **GEDDEN'S SUSTAINABLE COMMUNITY SOLUTION**

- **TARGET:** To encourage low emitters to reduce their GHG emissions by selling them on the carbon market to reward their measured and certified voluntary efforts. For the period of 2010-2020, we target to generate 32 MT of carbon credits, available on the voluntary market and easily fungible in the Quebec government PEDE system.
- **APPROACH:** stimulation of GHG reduction efforts, personal as well as collective, and then their accounting, aggregation and auditing from hundreds, if not hundreds of thousands, of low emitters grouped into a Community. Real and measured efforts that will be sold on the carbon market allowing the integration of the carbon cost into the economy.
- **SOURCE OF INVESTMENT:** Gedden, our technological, methodological and financial partners as well as the Quebec government support (since 2010) via Ressources Naturelles et Faune, Développement durable, Environnement et Parcs, Emploi Québec; and the regional carbon markets at the international level.
- **BUSINESS MODEL:** implementation of a Sustainable Community of low emitters in Québec; no disbursement for the participating members of the Community for the duration of the project (2010-2020); support and customer service for all members; registering, auditing, creation of an electronic and customized account, training, identification of reduction measures and opportunities for each member, third part audit; selling of GHG reduction titles at the best price possible; annual recurring sharing of 50%/50% of the net sale of the carbon credits associated with the reduction efforts of each community member. Finally, Gedden directly returns to the community 10% of its net profit before taxes into sustainable projects.

- **INNOVATION:** Development by Gedden and approval of a new worldwide methodology by the international standard VCS. This methodology will be the cornerstone of all Sustainable Community projects in the world and will favour its fungible aspects and the availability of certified GHG reductions of high added value. We will respond to the expected demand in several emerging regional markets.
- **PATENTS:** Gedden holds a positive patentability for its Sustainable Community Solution. A first application for patent has been addressed in January 2012 for the American market at the USPTO (United States Patent and Trademark Office <http://www.uspto.gov/>). Other applications are actually under preparation.
- **TRACKING PLATFORM:** our tracking platform, linked to each Sustainable Community member is operational.
- **ATTRACTIVE POWER:** Several partners are stimulating the joining to our Community (industrial parks, sectional associations, municipalities, etc.) Yet, we have thousands of low emitter members and several 10 year contractual commitments. This is only the beginning.

5. IMPORTANCE OF THE PEDE SYSTEM

We strongly insist on the importance of the PEDE, as the one considered by the MDDEP and recommended by the OECD. This type of system is essential to stimulate GHG emission rights supply and demand. Its implementation should be accelerated and should imperatively consider the significant contribution of low emitters, not only in terms of direct or indirect taxes, but as an economic reward for their measured efforts.

We must absolutely link the PEDE system with other measures that will be part of the APCC 2013-2020, such as regulation, taxation and others so to reach the ambitious objective of the 20 % reduction in 2020. (Ref. 1990).

Considering that 70% of GHG emissions originated from the low emitters, all national projections should be supported by primary ground data rather than extrapolating secondary data.

Recommandations

10. To stimulate the participation of thousands of low emitters through projects allowing the cash conversion of voluntary and measured efforts.
11. To stimulate the participation of low emitters in structuring projects that eases the constant analysis of their carbon footprint.
12. To favour the government's access to micro data from GHG low emitters in order to constantly have a precise picture: here, we are talking about ground data that are depersonalized, standardized, validated, confirmed and audited by third parts using a standardized methodology that is recognized throughout the world. This will allow the government to analyse detailed reports on the emissions (quantity and nature), the tangible GHG reduction of low emitters and to be able to indicate trend and opportunities for low emitters, by sector or other pertaining variables.

6. CONCLUSION

By reducing GHG emissions first, Quebec will be able to stimulate its social and environmental resilience. Climate change challenges both personal and societal behaviour for the technological choice and the economic model in order to come out of our dependency in fossil energy. Basically, it is a question of consciousness and attitude. To see the opportunity through a potential crisis. The Quebec APCC advocates a positive attitude, while paying attention to worrying predictions. Gedden works also in this sense by offering to low GHG emitters practical solutions that can be profitable to reduce GHG, on several aspects.

In this manner, little by little, we will create a new economy and a collective green wealth, capable of insure prosperity by confronting and dealing with climate changes. Still today, Darwin knows best, the law of adaptation applies to all species.



ABOUT GEDDEN

Gedden Inc. is recognised globally for its innovative, flexible and efficient solutions to stimulate reductions in greenhouse gas (GHG) emissions. Gedden's community-based solutions provide businesses and governments with alternatives in sustainable management. These alternatives focus on re-using waste, optimizing transportation and increasing energy efficiency by measuring and quantifying GHG reduction efforts. Therefore, Gedden's solutions make converting these efforts into exchangeable carbon credits (national and international markets). Gedden's team is proud to provide win-win solutions to businesses, governments as well as involved communities.



Gedden was carbon neutral in 2010-2011
Offset with