

South Eastman Transition Initiative

Submission to City of Steinbach Zoning Bylaw Review

November, 2009

Introduction:

The South Eastman Transition Initiative is a citizen's group based in south-eastern Manitoba committed to facilitating a transition to more sustainable lifestyles in South-eastern Manitoba. We want to commend the City of Steinbach on its excellent Vision Statement as found in the Official Community Plan: "To maintain and promote a safe, affordable, environmentally-responsible community that prides itself on sustainable growth, a diverse economy and being an inclusive, generous community," and for this opportunity to speak to the zoning bylaw review.

Our submission will limit itself to bylaw issues related to environmental responsibility and sustainability, without wishing to imply that the other dimensions of the Vision Statement are unimportant. Our submission divides into two sections. We welcome debate on each of the two sections, however if the debate on the two sections can be kept separate, the debate would be more productive.

The first section of our submission deals with the fundamental [implicit] premise going into the bylaw review. That premise is that energy prices, particularly fuel prices will continue with the same stability they have maintained over the last 50 years. We believe this premise is flawed, and that the penalty for following the flawed premise will be very high.

The second section of our submission suggests some ways in which a premise of high, unstable fuel prices could be incorporated into the city's zoning bylaws.

Section 1: The underlying premise of the City Zoning Bylaws

Any plan makes certain premises. A major premise incorporated into any development plan is the future price of energy, specifically the future price of fuel. We recognize that sustainability is a much used word these days, a word that means different things to different people. Our Initiative exists because we hold the conviction that each of us individually, our community and our nation will soon need to deal with the reality that oil is becoming a scarce commodity. This will mean that instead of facing a stable fuel price of \$1.00 per litre, we will be facing a fuel price of \$3.00 per litre, or perhaps much higher. There is little the city of Steinbach can do to affect that price, but there is much city planners can and could do through its bylaws to reduce the impact of skyrocketing fuel prices on the city.

Of course we may be wrong in our premise about fuel prices. We can briefly examine that possibility. Put simply, we are faced with four possible scenarios:

<p>SCENARIO A Premise: Continuing \$1.00 fuel prices What actually happens: \$1.00 fuel prices</p>	<p>SCENARIO B Premise: Continuing \$1.00 fuel prices What actually happens: Skyrocketing fuel prices What will be the long term cost if this actually happens?</p>
<p>SCENARIO C Premise: Skyrocketing fuel prices What actually happens: \$1.00 fuel prices What will be the short term cost if we build on this premise?</p>	<p>SCENARIO D Premise: Skyrocketing fuel prices What actually happens: Skyrocketing fuel prices</p>

To adequately fill out the above chart will require more research time than we have been able to muster, nevertheless we can learn from the chart. Scenario A and Scenario D reflect sound planning, in that the plan accurately projected fuel prices and planned accordingly. Our reading of the draft bylaws is that it implicitly assumes scenario A. It is the contention of our Initiative that we should be planning for scenario D. If the city plans for scenario A, but scenario B develops, there will be a price to pay. But if the city plans for scenario D and scenario C develops, there will also be a price to pay. It is our contention that: a) high, unstable fuel prices within five or ten years is much more likely than the stable prices we have experienced in the last 50 years, and b) the penalty for being in scenario C as a result of anticipating scenario D would be much lower than the penalty for being in scenario B as a result of anticipating scenario A.

We strongly advocate that the City follow premise D. This is not the place to make the case for diminishing oil reserves. We do, however, wish to make an analogy with the Winnipeg Floodway. In 1950 the Red River flooded and did extreme damage in Winnipeg. Not only did Winnipeg flood, but Grand Forks and Fargo also flooded. As we all know, Winnipeg’s long term response to that flood was the construction of the Red River Floodway – essentially scenario D above. Grand Forks decided to follow scenario A. For many years it seemed Grand Forks had made the wiser choice. For many years it seemed the likely scenario for Winnipeg and Manitoba would be scenario C. The Floodway was disparagingly dubbed Duff’s ditch. But even then, prior to 1996, there was recognition that the building of the Floodway had not all been bad. The building of the Floodway had created jobs. Then came 1996. Winnipeg was clearly into scenario D, and Grand Forks was into scenario B. Does anyone know what the earlier decision not to invest in adequate protection cost Grand Forks?

Section 2: Zoning bylaws that anticipate skyrocketing fuel prices

We are not professional urban planners; nevertheless we have some thoughts as to what could be done in anticipation of skyrocketing fuel prices. We think this should be dealt with through incentives and disincentives in the zoning bi-laws. What we are proposing has similarities and precedent in current plumbing and electrical codes, but would not be as absolute. What we envision is that there would be a vehicle, perhaps the cost of the building permit, or perhaps differentiated property taxes that would bias in favour of certain kinds of construction. We believe this to be rational leadership on the part of City planners, and such changes to be in the City’s interests. If/when fuel prices skyrocket, a well insulated house will have significantly more value than a poorly insulated house.

There is currently a body of knowledge that could be described as “best building practises for energy efficiency.” Not being builders ourselves, we don’t know exactly what that is. Many of these practices were incorporated into the new Hydro building in Winnipeg. Manitoba Hydro recently sponsored a

workshop in Steinbach where they promoted two of these technologies, geo-thermal heat and solar hot water. It was clear from the presentations at that meeting that Manitoba Hydro, the Manitoba government and the Government of Canada are convinced the adoption of these technologies is of benefit to the province and the country. However it is also recognized that these technologies will not catch on if dissemination depends on economics alone. So Hydro, Manitoba and Canada have put incentives in place to encourage home builders to implement these technologies. But these incentives cost money, and the taxpayer is paying for it. On the other hand, incentives built into zoning by-laws do not need to cost money. We envision that city planners, working with suitable advisers, would establish a list of environmental best practices, a list that would be reviewed periodically as new knowledge emerges. The degree to which a builder is proposing to incorporate these technologies would affect the cost of the permit. We contend that the cost of the permit would need to be high enough to significantly skew building practice. Alternately, the degree to which any home, new or old, has incorporated these best practices would/could/should significantly affect their taxes.

We are not building experts; nevertheless we are convinced there are many energy saving technologies worthy of examination. We discuss some that we consider worthy of consideration below. In no case do we suggest that enough research has been done to move strongly in that direction. Nor are we saying that these are necessarily the most worthy of consideration. But we are strongly convinced that something needs to be done.

Geo-thermal heating/cooling. According to Manitoba Hydro two things should be noted about this heating method. First the electrical bill for geo-thermal is 35% that of electric heat, and secondly, there are significant economies of scale in the installation of geo-thermal heat. It follows that district heating would make geo-thermal heating more attractive, yet without encouragement through zoning regulation district heating is unlikely to take off.

House orientation. In most cases orientation does not affect the cost of construction, but in terms of energy efficiency, orientation is significant. South facing windows result in solar gain, and roof line orientation affects the ease of installing solar hot water panels, whether at the time of house construction or as a later retrofit. Zoning bylaw will impact the layout of a housing development, and the layout of the housing development will affect house orientation.

Solar hot water: According to Manitoba Hydro, if homeowners tap various incentive programs, solar hot water is cost effective. But installation will be problematic if the roofline is not running east and west.

Energy Sourcing: Of all the larger population centres in southern Manitoba, Steinbach is uniquely situated. It is on the edge of the forest and it is surrounded by livestock operations. We believe Steinbach needs to build on the comparative advantage this offers with respect to energy options. It is ironic that most of the interest in bio-fuels is directed toward possible use as transportation fuel. But bio-fuel is singularly unsuitable for transportation, which is why it needs to be converted to ethanol and bio-diesel, a singularly inefficient process. On the other hand, bio-fuel is extremely appropriate for space heating. Currently, much effort and energy as well as substantial subsidy is being directed toward research into efficient and effective conversion to ethanol and bio-diesel. Other subsidies are going directly towards the actual conversion of biomass to ethanol and biodiesel. But the technology to effectively use biomass to heat buildings already exists. Many in the southeast are already using wood for home heating. There are small cities in Scandinavia where the entire city is heated with biomass.

There is little doubt that wood heating technology could be transferred from Scandinavia to Canada. Currently, because of our access to cheap hydro and cheap natural gas, biomass heating in Steinbach is not be as attractive as it is in Scandinavia; nevertheless we believe it is worth investigating even now. If

we assume skyrocketing fuel prices in the future, having the infrastructure in place for biomass heating will be a huge boon.

District Heating: Furnaces using fossil fuels are easily downsized without losing efficiency. This is why one furnace per home is the norm in Canada. When using solid fuels, small furnaces are not as efficient as big furnaces. This is why district heat has always been popular in communities depending on coal, and in European communities using biomass heat. This is why district heating systems will be necessary if wood is to become a serious home heating fuel in Steinbach. Bylaws could be structured in a way that would give home developers a strong incentive to bring in district heat.

Transportation: As fuel prices go up, Steinbach residents will walk more, and the city needs to invite people to do this.

- The emphasis on maintaining and densifying the Central Business District is to be applauded.
- More could be done to develop the green space, particularly along the waterways passing through the city.
- We applaud the recent establishment of cycling lanes, and advocate for stronger moves in that direction.

Local Food: It hardly requires research to know that much of the food consumed in Steinbach today has been moved long distances before it gets to the dinner table. This occurs because fuel is cheap compared to other food delivery inputs. However if we assume fuel prices will go up, Steinbach will be well served if it has infrastructure in place to facilitate local food initiatives. The Farmer's Market in summer, as well as the community gardening plots near the arenas are positive steps.

Sewage technologies to reduce water use. Low flush toilets and grey water recycling systems not only reduce the amount of water used, but also reduce the water entering the city sewage system.

Above are but a few technologies that would/could be encouraged through zoning bylaws, were Steinbach to plan with the assumption that our current access to cheap fuel will not continue much longer. It is our hope that the finite nature of our current fuel sources will be taken into account by the Steinbach City Council as it reviews its zoning bylaws.

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