

*** Optimal Scale Biowaste Management by Trina Go Listanco ***

To:

Alberta Climate Change Action Leadership Advisory Panel

Thank you for the opportunity to share our insights and suggestions, and to contribute to creating a more sustainable Alberta.

While there are a number of encouraging and commendable programs for larger enterprises and start-up technology companies e.g. <http://biocleantech.ca/> and the <http://ccemc.ca/about/> and others, I hope that our Climate Change policy will also be support small businesses, households and neighborhood-scale projects and initiatives especially for green wastes management, biofuels or biogas production.

The collection, hauling, and transportation of solid wastes from cities to peri-urban sites contribute to the cost and environmental footprint of centralized Municipal Solid Waste Management. Promoting and supporting decentralized and optimal scale operations for urban residential green waste management may be more sustainable in the long run.

Examples of household/ community scale technologies:

- 1) <http://impactbioenergy.com/horse-ad25/>
- 2) <https://homebiogas.com/how-it-works/>
- 3) <http://en.puxintech.com/domesticbiogasplant>

Also, local small businesses need technical (e.g. permitting/ site selection) and financial assistance (e.g. tax breaks, lease to lands, feedstock collection) to actively transition and contribute to greening the local economy. I believe sustainability should be encouraged and pursued also at the local level.

I am more than willing to initiate and cooperate with the Provincial and City authorities for a neighborhood biogas pilot project in my backyard in Calgary.

In health and sustainability,

Trina Go Listanco (Signed)

*** SOLAR ENERGY RECOMMENDATIONS by Endre Balogh ***

To:

Alberta Climate Change Action Leadership Advisory Panel

Our household has been on green energy for more than a year! From my experience, solar microgen is a great idea within the city as substantial renewable power is produced within the city limits reducing the load on the transmission lines and system losses. This renewable energy is also consumed where it is produced, encouraging

more awareness for energy conservation and consumption. The solar panel installation also provides extra protection for the roof against hail damage, extends the lifetime of bitumen shingles, and gives shade on warm summer days.

My recommendations for our Provincial Climate Change Leadership Initiative:

1. Reduce unrealistically high regulated wire fees for microgenerators,
2. Credit delivery charges when exporting micro generated electricity into the grid,
3. Higher rate on exported electricity than the purchase rate,
4. Provide investment opportunities for local residents and companies – e.g. support for solar cooperatives for people unable install solar on their roofs, provide training for local people to become installers,
5. Promote Canadian made solar panels and solar equipment by providing tax breaks on them and increasing import duties on solar panels and components once the local factories are producing same or better quality components,
6. In case solar storage is an issue create solar storage systems by building a hydroelectric reservoir/pump system between two lakes at different elevations (Spirit of Ireland, https://en.wikipedia.org/wiki/Spirit_of_Ireland)
7. Provide low interest rates on loans for residential solar power investment. Cash allowance for home owners installing solar PV over certain capacity – cash to be paid back long term,
8. Possibility to add the solar investment to the mortgage,
9. Reduction of home insurance as the solar panels are providing protection to the roof and it is cheaper to replace a solar panel than equivalent area bitumen shingle,
10. Credit on property tax in case if the solar PV production is covering over a certain percentage of the household energy demand,
11. Carbon tax credit to the homeowners or some payback from carbon tax,
12. Classification of buildings according to energy efficiency. This could be an important factor when evaluating property tax or value of a building. Factors could be:
 - a. Microgen installed on the house covering the percentage of the annual demand
 - b. Type of domestic hot water system – e.g. solar thermal storage, electric solar PV
 - c. Type of boiler – e.g. high efficiency condensing
 - d. Type of space heating – e.g. heat pump, condensing furnace, etc.
 - e. Windows on the house – e.g. double or triple plane
 - f. Type, thickness and age of insulation
 - g. Rainwater storage system – e.g. size compared to the area of the green space around the house
 - h. alternative plants to the highly water wasting and energy demanding grass to conserve water, electricity and manpower
 - i. waste collection and recycling services available in the area, small scale residential green waste conversion
 - j. Set-up an independent authority would evaluate the building, the owner could receive green marks, which would help to give guidance for homebuyers and could also provide benefits to the actual Owner e.g. property tax credits, insurance credit, etc.
 - k. Biogas producing plant within the household to recycle burnable gasses from biodegradable waste, etc.

13. Promote community awareness on green energy, organize green seminars, build demonstration houses where people could be toured around to get to know about up to date technologies,
14. All above supports should also be applicable retroactive to Owners already running green systems,
15. Promote electric vehicles in Alberta and provide savings to household who has already got solar microgen installation above a certain size.

The status and historical production of my solar PV microgen system could be reviewed here:
https://enlighten.enphaseenergy.com/pv/public_systems/vQze640158/overview

I would be glad to sit down for a discussion with your team.

Kind regards,

Endre Balogh (Signed)