



## Green Energy Alliance of Alberta

September 29, 2015

**RE: Climate Change Panel Submission**

Dear Climate Change Advisory Panel:

Please find attached some ideas and recommendations for your consideration in shaping Alberta's future climate change policy. The GEA represents over 30 member companies and organizations in Alberta, all of which are either directly involved or are stakeholders in the green energy industry in Alberta.

The problems of climate change pose a great challenge and require immediate reductions to our GHG emissions, but Alberta is well positioned to address this challenge with a skilled workforce ready for a change. We believe this is our best opportunity to create a more diversified economy and to make Alberta a leader in renewable energy. Our recommendations are centered around promoting the adoption of renewables and energy efficiency which will create high quality local green jobs at a time when we need them the most.

Please do not hesitate to contact us should you have any questions. We would welcome the opportunity to explain some of our proposals in more detail.

Regards,

Green Energy Alliance

E: [info@greenenergyalliance.ca](mailto:info@greenenergyalliance.ca)

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# GEA

## Green Energy Alliance of Alberta





## Who We Are

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The GEA is a non-profit organization which represents over 30 member companies and organizations from all over Alberta and is comprised of leading members of the solar, wind, geothermal, and energy efficiency industries, as well as municipalities, educational institutions, green builders and architectural firms which collectively employ hundreds of workers in Alberta. Our member firms are deeply embedded in Alberta's green energy industry and have a tremendous amount of knowledge and experience; our members alone are responsible for more than 90% of the Solar PV installations in Alberta.



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“THOSE WHO SAY **IT CANNOT BE DONE** SHOULD NOT  
INTERRUPT THOSE WHO ARE **DOING IT.**”

GEORGE BERNARD SHAW

## What Alberta Needs

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1. A sustainable, diversified, greenhouse gas (GHG) free economy
2. 100% renewable energy in the electricity grid by 2050
3. High quality and local Green Jobs
4. To establish Alberta as a global leader in green energy

## How We Get There

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Alberta needs to take immediate action on reducing our GHG emissions, but effective, long lasting policies take time to develop. For this reason, our proposal suggests a two phase plan which uses Phase 1 to “get the ball rolling”, while the province researches and develops the best long term policies for Phase 2 which will require some legislative and regulatory changes.



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## Phase 1 (1 - 3 years): We Can Get Started Today

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- Redirect existing carbon levy funds to support renewable energy and emissions reductions through simplified incentives and/or rebates directed at renewable technologies. The funds, which will be available to all residents and companies in Alberta, should only be used to support proven existing renewable technologies that provide immediate GHG emissions reductions. For example, a direct rebate to consumers based upon a \$/watt valuation for Solar PV or rebates for energy efficiency programs.
- Begin work on removing barriers and create support mechanisms to promote the rapid adoption of green energy and energy efficiency.
- Set renewable energy targets for electricity generation.
- Level the playing field by putting a universal price on carbon pollution; through a carbon tax.
- Start developing long term performance based strategies and incentives for recognizing the importance of renewable energy. Whether it is a feed-in tariff or other mechanism, Alberta has the opportunity to learn from other jurisdictions and implement a strong 'Alberta made' approach.



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## Phase 2: We Can Create a Legacy

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- Remove the Phase 1 subsidy program and replace it with a long term performance based strategy for supporting renewables and energy-efficiency (eg. feed-in tariff etc...)
- Establish a schedule for increasing the carbon tax (provide certainty for long term planning and investment)
- Replace all coal generation with renewables; Support *both* large and small projects to create a robust sustainable grid through a performance based program:
  - Small scale to give all Albertans the opportunity to participate in building the new green energy economy
  - Community scale systems to support local sustainable energy opportunities
  - Utility scale to strategically and successfully achieve a transition to green energy
- Create new energy codes and programs that dramatically improve energy efficiency across the board



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## Detailed Discussion on Proposals

### **Long Term Performance Based Renewable Energy Incentives**

One advantage that Alberta has in being 'late to the game' is that we have the opportunity to learn from other jurisdictions on the best way to develop a long term and viable energy incentive strategy. We can learn from the experience in Germany, Ontario, the U.S.A and other jurisdictions to come up with a unique 'Alberta made' strategy that will not only promote renewable energy and energy efficiency, but will also stand the test of time and leave a legacy we can be proud of.

We realize that developing something like this takes time and expertise, which is why we have structured our proposal into the two Phases. Phase 1 allows the province to get the ball rolling immediately. While incentives and rebates are not the ideal solution, a temporary program would kick start the energy transition and allow the green building industry to expand and create jobs. As soon as the long term strategy is developed, the Phase 1 rebates would end.

### **Carbon Levy Fund**

The existing carbon levy fund presents a tremendous opportunity to kick start the renewable energy transition without any cost to the taxpayer. The funds have not been used effectively in the past, but if used to fund proven, existing renewable technologies (which are already available to consumers), we can achieve significant emissions reductions in a short period of time. The non-taxed based money is there, let's use it and make it available to every resident and business in Alberta to further increase the "Alberta Advantage". This is a perfect opportunity to get large emitters to pay for GHG reductions. This approach (which carries no additional cost to government and taxpayers) has the huge side benefit of building the green energy industry in Alberta which will create green jobs and help diversify Alberta's economy; making it more resilient.

The carbon levy fund is currently only funded by large emitters at \$15/tonne (increasing to \$30). We believe that the fund should be contributed to by all emitters (see Carbon Tax below), and that the price should go up regularly and to a number that will act as a real incentive to move to renewable energy.

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## Barriers and Support Mechanisms

The following are some barriers that we see in the industry as well as some support mechanisms we could use to support the development of renewable energy and energy efficiency:

### *Barriers:*

- Ineffective distribution of the carbon levy funding
- Incorrect public perceptions - green energy technologies are far more robust than most people realize - public education is required to bust myths
- Bureaucracy and lack of flexibility in grid electricity regulations serve as barriers to decentralized production
- Microgeneration Agreement needs to be updated to allow:
  - Systems larger than the 1MW cap
  - Consumers to be paid a premium for electricity generated by renewable sources (per strategy discussed above)
  - System owners to produce more energy than they consume annually
  - A utility meter to be installed to measure purely the output of the solar system. This will allow for the creation of a performance based rebate program (Phase 2)
- Permitting inconsistencies across the province
- Municipal relationship to the grid. The big utilities want to stay the big utilities. The ability to decentralize would allow for more flexibility and reliability

### *Support Mechanisms:*

- Develop a standard permitting process between municipalities throughout the province that minimize the economic impact on renewable energy projects
  - Establish performance based energy efficiency programs (Alberta is the only province without such a program)
  - Establish training and province wide permitting requirements for geothermal (geoexchange) installations
  - Provide fair price incentives to support the rapid growth of renewable energy
  - Government-backed Loan Guarantees and Power Purchase Agreements (PPAs)
  - Encourage municipal PPAs to buy only renewable energy, for example:
    - Medicine Hat, 6MW of Wind in 2014
    - City of Calgary, approx 50MW of renewable energies: wind, hydro, biomass and solar power
  - Adopt Renewable Portfolio Standards (RPS) requiring a proportion of all new generation to be renewable
  - Emissions performance standards for natural gas that account for leakage
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### **Renewable Energy Targets for Grid Generation:**

In order to have any meaningful impact on GHG reductions in this province, we need to drastically reduce the GHG emissions associated with electricity generation. We believe the best way to achieve this is by mandating a renewable energy target for grid generation. Similar actions in other jurisdictions have shown that this is a very effective strategy. Examples like Texas, show that the targets are not only quickly met, they are often very quickly exceeded. Coal generation should be completely phased out as soon as possible and a target of 100% renewable by 2050 should be established.

### **Energy Efficiency in Buildings:**

One of the key components in our energy transition strategy must be very aggressive improvements to energy efficiency in new and existing buildings. The more efficient our buildings are, the less energy we need to create at the building and grid level. We believe a broad, comprehensive energy efficiency program should be established that:

1. Encourages existing building owners to significantly improve their building's energy efficiency
2. Requires new buildings to meet a target energy use intensity (EUI) similar to that used throughout Europe (eg. 100 kWh/m<sup>2</sup>/year)



**Carbon Tax:**

A universal carbon tax is one of the fairest, most effective ways to reduce GHG emissions because it forces the polluter to pay. The carbon tax should apply to all emissions regardless of size or sector, and the income generated should only go into renewable energy investments. However, we strongly believe that there should be exemptions or rebate mechanisms to compensate those that cannot afford to pay. The poorest members of our society are also typically the ones that consume the least so there must be a mechanism set up so that we do not penalize and financially stress those that are already struggling.

**Benefits of our Plan:**

- Existing money in the carbon levy fund means that paying for renewables would cost the government or taxpayer nothing
  - By taking a phased approach we would start the work *immediately* and begin creating jobs, growing small businesses, and empowering individuals to take action
  - Investments in small to medium scale systems would allow all Albertans to take a part in the energy transition directly
  - Predictable energy cost for citizens and small business including low income, rural and aboriginal communities
  - Incentives or investments in renewable energy will immediately grow the green energy industry and create quality local, green jobs
  - By phasing out coal power and increasing the use of renewables, we would improve Alberta's air quality and reduce negative health impacts (and the associated healthcare costs)
  - Decentralized energy production would create a more robust, efficient, and, lower cost grid
  - We can address poor global public relations directly by making Alberta a leader in green energy
  - **We have the opportunity to be proud of a new, green Alberta**
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