**Lesson 9:How Can Changes in the Electricity Sector Reduce Carbon Emissions (2nd Half)?**

**Part 4: Examining and Comparing Non-Monetary Aspects**

1. Suppose you don’t care as much about what it costs, and just want to choose the solutions that will remove the most carbon dioxide.

1. Which four solutions can remove the most carbon dioxide?
2. What do they have in common?
3. Which of the four solutions is the most economical and which is the least economical? Consider the savings and the savings per gigaton of CO2.

2. The top 4 solutions can reduce CO2 emissions by 250 gigatons over the thirty years. Should we bother with the other fifteen solutions? Why or why not? Include numbers.

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3. Consider the next 3 solutions that remove the most CO2.

1. What are they and what do they have in common?
2. How do the initial costs compare for these three solutions? What about the long term savings?
3. What is the **Canada** **Greener Homes** program and how does it encourage the adoption of these solutions?

4. What are the next 6 most significant reducers of CO2? How can the government encourage the adoption of these solutions? What are municipal, provincial and federal governments doing already? Try searching with questions like “How is the Ontario government encouraging the use of electric cars.”

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|  | **Municipal** | **Provincial** | **Federal** |
| **Electric Vehicles** |  |  |  |
| **Solar Hot Water** |  |  |  |
| **Geothermal** |  |  |  |
| **Smart Thermostat** |  |  |  |
| **Heat Pumps** |  |  |  |
| **Waste to Energy** |  |  |  |

**Part 5. Other Aspects and Conclusion**

1. There are three different solutions involving ‘**Wind**’ generation.

1. The most significant two solutions are **Offshore** and **Onshore**. How and why are their numbers for CO2 reduction and implementation costs so different?
2. What is the **Ontario Offshore Wind Moratorium** and what effect is it having on Ontario?

2. There are four solutions involving ‘**Solar**’.

1. Describe how they differ in production and transmission.
2. What can governments do to increase the implementation of these solutions?

3. Look at a variety of different solutions. What are four very different **co-benefits** to the solutions?

4. Project Drawdown’s plan calls for all of these solutions to be implemented (plus 72 more in other sectors). Which three would you choose to start with? Be prepared to justify your choices.

5. There is a lot that individuals can do to support these climate solutions. You might be able to influence your family, school, place of worship or other community group to adopt some of these solutions. Which of these solutions might be adopted?

6. The solutions that were not mentioned in the previous question will be ones that require government support and leadership. When you are older, you can vote. What can you do now to encourage your government to adopt these solutions?