中国高中生美式辩论联赛
NATIONAL HIGH SCHOOL DEBATE LEAGUE OF CHINA

NHSDLC 2016 Spring Topic Brief

Resolved: The Chinese central government should adopt a carbon tax.

I. Key concepts of the resolution

Carbon taxes: A carbon tax is collected from people or organizations (like companies) for putting carbon dioxide (CO_2) into the air. Usually, this is done by taxing the fuels that release this CO_2. A fuel's CO_2 emissions are very closely tied to its carbon content and with how hot it burns, and we have very good measurements of carbon content and heat emissions for many different types of fuel. So both of these make a good basis for a carbon tax. Most carbon taxes are a set price you pay for each ton of CO_2 you emit. In British Columbia's carbon tax, for example, the price started at $10 per ton in 2008 and rose by $5 each year up to $30 per ton. In the US, a tax has been proposed with a price of $20-30 per ton.

The idea is that a carbon tax will make things which release CO_2 more expensive. Imagine a carbon tax which is paid by companies that make or import fossil fuels. The size of their tax is set by how much of each kind of fossil fuel they produce, and how much CO_2 each type of fuel releases when it is used. This tax would cost these companies more money, so they would raise their prices. Then, everybody who buys fossil fuels from them would also have to pay more. This is called "passing costs on to the consumer". In this kind of tax, businesses pay the taxes instead of single people paying them, but single people still end up paying more so the result is similar.

This means that things which use a lot of fossil fuels would get much more expensive, and things that did not use a lot of fossil fuels would stay about the same price. One of the biggest reasons people like fossil fuels is that they are cheaper than clean fuels, and a carbon tax would change that.

Some carbon taxes, and some proposed carbon taxes are “revenue neutral”; this means that the government takes the money which it gets from the tax and gives it back to people by lowering other taxes or by giving people money. In a revenue neutral tax, you will spend more money because prices are higher, but you will also get more money because your other taxes go down, or because the government sends you money. Some people suggest lowering the corporate income tax, a tax which businesses pay.

This may sound like a problem. If you're raising one tax and lowering another, don't things just stay the same? How is the tax supposed to change people's choices? The answer is that the percentage of your money which you spend on CO_2-heavy things gets higher. Emitting less CO_2 might save you money, and if there is a carbon tax, it will save you more money or be more likely to save you money.

For example, maybe you drive to work and spend 12 RMB per day on gas. It's time for you to buy a new car. You could buy a more efficient car, or not. This new car is twice as efficient, so you would only spend 6 RMB per day on gas. This means you save 6 RMB per day, or about 1500 RMB per year.

If a carbon tax raised the price of gas by 50%, then the less efficient car would cost 18 RMB per day, and the more efficiency car would cost 9 RMB per day. You would save 2250 RMB per year. We said before that carbon taxes change behavior. This is how: the cost of emitting a lot of CO2 gets much higher, while the cost of emitting less CO2 gets only a little higher, or doesn't change at all. People often make decisions by comparing prices. Even if the tax is revenue-neutral and you get some money back, the amount you get back is NOT decided by how much the carbon tax costs you. So if you change your behavior, you save money and get to keep the money that the extra money that the government is giving you.

A carbon tax involves a lot of decisions. What to tax, who should pay the tax, how high the tax should be, how the tax should grow over time, and more. We won't list all of the questions here. But when you're debating the topic, bear in mind that not every detail is equally important. Depending on the arguments you make, some details might not matter to your case at all.

Carbon and carbon dioxide: Carbon (碳) is a chemical element. Carbon dioxide (二氧化碳) is a compound containing carbon. Scientifically, they are totally different. But political language almost always takes the subtleties of science and rolls over them like a tank over a patch of flowers. So a lot of English-language writing about carbon taxes will refer to "carbon" instead of "carbon dioxide". The entire name "carbon tax" is an example of this, as are terms like "carbon footprint", but it's also common to see people literally say "emitting carbon into the atmosphere" when they really mean "emitting carbon dioxide into the atmosphere". Try not to let it bother you too much. There is

also a separate issue of actual carbon emissions. China's most visible air pollution–poisonous white or brown haze–is partly made of amorphous carbon, not carbon dioxide.

Climate change:
The climate of a region or city is its typical or average weather. For example, the climate of Guangzhou is sunny and warm. But the climate of Antarctica is freezing cold. Beijing is traditionally quite dry while Chengdu is generally fairly humid. Earth's climate is the average of all the world's regional climates.

Climate change is a change in the typical or average weather of a region or city. This could be a change in a region's average annual rainfall, for example. Or it could be a change in a city's average temperature for a given month or season.

Climate Change often refers specifically to global warming. Global warming is an increase in the Earth's average temperature caused by increasing amounts of greenhouse gasses in the atmosphere. The sun warmths the Earth, and greenhouse gasses cause the Earth to retain more of this heat. The more greenhouse gasses are in the atmosphere, the hotter Earth gets.

The weather in each part of the Earth is particularly dependent on the warmth of the oceans and the atmosphere; a small change in the temperature of the earth can causes huge changes in prevailing weather. For example some areas may experience drought or flooding or more severe hurricanes and storms.

Modern global warming can be traced to the rise of the Industrial Revolution in Europe and the United States. Modern factories, modes of transportation, and inventions such as electricity required large amounts of coal and oil in order to function, which caused the amount of carbon dioxide in the air to increase dramatically. Since 1900, the global has climate warmed by ~0.8°C, and temperatures in the past ten years have been the highest since measured records started in the 19th century and for many centuries before that. Most scientists agree that the temperature is likely to rise another 3°C, but there is a high probability that it may rise further.

Some people believe that global warming is not real. Most scientists, however, agree that it is happening and that global warming increases the risk of droughts, flooding, and severe weather. That said, scientists do disagree on how severe those risks are. Some scientists argue that the risks are quite

severe and quite immediate. Some even say that the effects of global warming are irreversible, that there is nothing we can do to stop the dangers of global warming at this point. Others argue that the effects are quite minimal and will be felt over a long period of time, even hundreds of years. Most scientists fit somewhere in the middle, and most believe that governments and people can take action to reduce global warming by reducing the amount of carbon-burning fuels they can use.

Energy economy: The energy economy of a place or group is the ways and rates at which energy is produced, moved, stored, and consumed in that place or group. It is similar to how a regular economy is the dynamics of wealth in a place or group.

China's Energy Sources in 2013:
China imported roughly 16% of its energy, but exported less than 2%. China's energy supply is dominated by coal, which gave China about 66% of its energy. 38% of China's energy was used to make electricity, 30% was used by industry, and 8% was used for transportation. Coal was 86% of China's electricity, but about half of that electricity was lost as waste. Oil was 91% of China's energy in transportation. For more details, explore the "energy balance flows" and "energy atlas" entries for China on the International Energy Agency's website: https://www.iea.org/statistics/topics/energybalances/. The IEA has been accused

These national numbers hide big differences between regions.

Fossil fuel: Oil, coal, and gaseous alkanes, especially methane (甲烷). All fossil fuels are burned when they are used to produce power, and all of them contain carbon, which produces when CO_2 burned. Fossil fuels are in limited supply. They are called fossil fuels, because they come from the decaying bodies of prehistoric animals.

Renewable energy: Wind power, solar power, and hydroelectric power. These are resources that are naturally plentiful and replenished within a short time span.

II. Examples of carbon taxes

China does not have a carbon tax, but plenty of other places already do. The world's oldest carbon tax is in Finland, where the program has been quietly running since the year 1990. Ireland, Chile. and Sweden also have carbon taxes. Australia had a carbon tax but later repealed it. Immediately after doing so, carbon emissions in Australia–which were falling before–increased. British Columbia, a province of Canada, has a comprehensive carbon tax program, and was recently experiencing above-average economic growth and falling CO_2 emissions. Quebec, another province of Canada, also has a carbon tax. Finally, the U.S. city of Boulder, Colorado has a Carbon tax which was renewed by voters in 2012.