

# The Fundamentals of Climate Change Legislation



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### Agenda





I. Global warming science is clear and the US is moving rapidly towards a federal cap to reduce emissions



II. The most effective way of reducing global warming pollution is through a cap and trade program



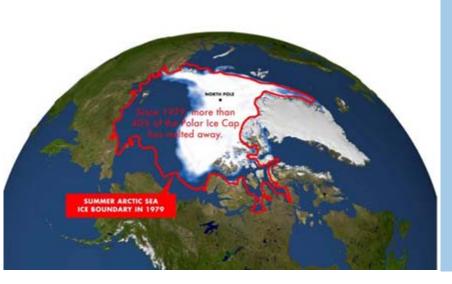
III. There is no conflict between protecting the climate and the goals of economic and energy security.



IV. Protecting the climate can bring economic and clean energy opportunities to Nebraska.

#### I. Global warming science is clear





Nobel Prize-winning IPCC Concluded in 2007:

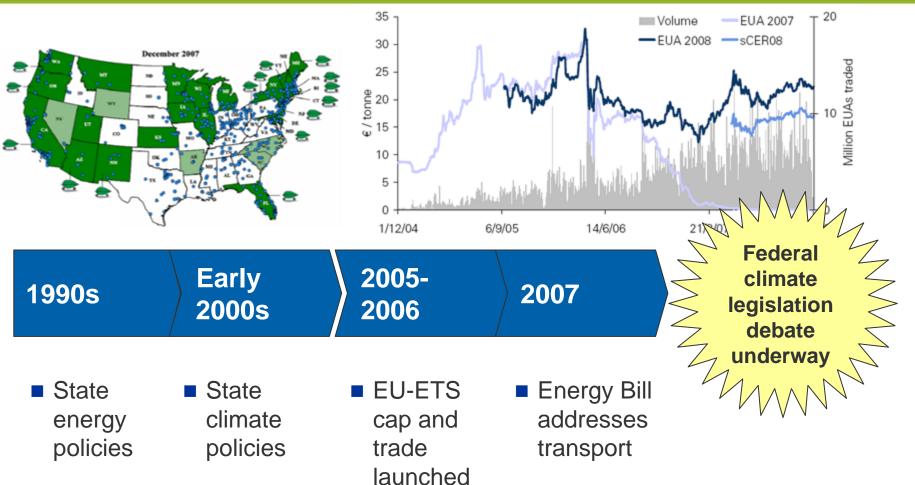
- Global warming is "unequivocal."
- Most warming since mid-20<sup>th</sup> Century *very likely* (> 90% probability) due to heat-trapping pollution
- 2-12 °F additional warming during 21st century if emissions are not curbed

"The scientific evidence that human activity is ruining the planet has gone from convincing to compelling. Climate change is real. It is pervasive, and the time to begin acting is now."

~ Exelon CEO John Rowe

## Global warming debate has shifted to federal level





### **Corporate Support for Climate Legislation**





































































## Acting now to reduce US global warming pollution will yield strong net economic benefits





- McKinsey concluded no net economic cost to control US global warming emissions if we start now
  - Benefits from reduced energy use cover the cost of cleaning up remaining supply
  - Study considered only proven technologies and assumed uninterrupted improvement in standard of living
- Other studies suggest benefits of stopping global warming range up to 20% of GDP by 2100



## Federal climate legislation

is going to happen.

... now the question is:

How do we shape it in a way that creates the most benefit while reducing global warming pollution?

#### I. Cap and Trade Overview

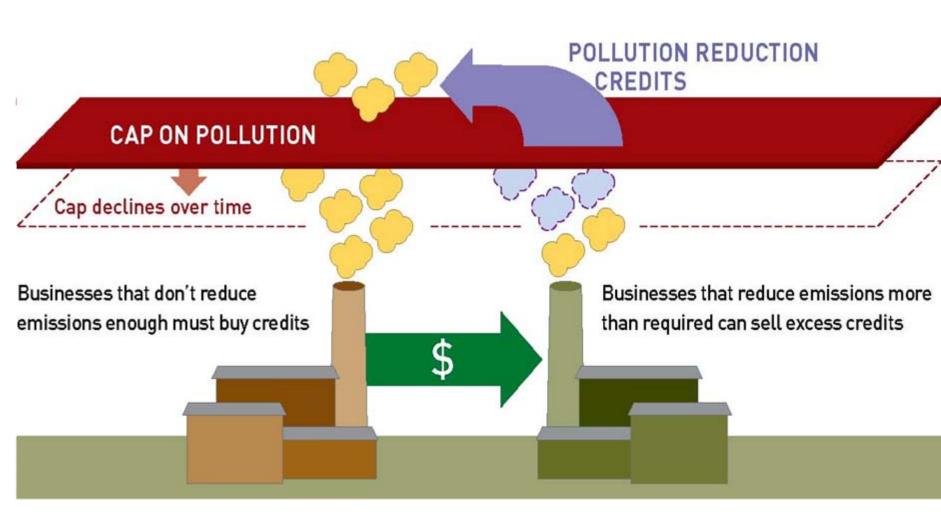


## **5 Simple Steps to Cap and Trade**

- 1. **Set the cap**: Guided by climate science, the government sets the cap on overall greenhouse gas emissions.
- 2. Allocate permits: The government assigns "allowances," with each representing a ton of carbon dioxide emissions, so that their total number equals the cap. Allowances can be distributed to firms for free, or auctioned off.
- 3. **Measure emissions:** Firms monitor and report their emissions. Electric utilities, for example, already have equipment installed on smokestacks of power plants that measures pollution in real time and sends the data to EPA.
- **4. Ensure compliance**: At the end of each year, every regulated firm turns in enough allowances to cover its emissions.
- **Guarantee flexibility**: The market provides flexibility in how firms can meet their targets. They can reduce emissions, buy allowances, borrow allowances from the future, use "banked" allowances from earlier years, or purchase offsets from non-covered entities.

## How cap and trade works





## III. Answering Claims that Climate Protection "Costs to much."



## Some claim that climate legislation will:

- raise energy prices, adversely impacting small businesses and low-income consumers
- Push manufacturing companies abroad to countries without climate legislation, destroying jobs
- Hit Nebraska harder than other states because of its reliance on coal for electricity

Sensible climate solutions won't do any of these things.

## Minimizing the Cost of Climate Legislation to Covered Businesses and Utilities



- Trading
- Banking
- Borrowing
- Offsets
  - domestic reductions in sources outside the cap can be used.
  - international credits from other trading systems also can be used.
- Carbon Market Efficiency Board manages price volatility and oversees trading

### Consumer protection and compensation



Allocate allowances or funding to low income and middle income energy consumers to offset rate increases

Allocate allowances or funding towards energy efficiency investments to reduce energy consumption for lowincome consumers

### Jobs and international competitiveness



Allowance requirement for GHG emission-intensive products from countries that have not taken comparable climate action by 2020

Energy-intensive industry allocation tied to domestic employment

Climate Change Worker Training Programs

#### IV. Economic Benefits to Nebraska



- Development of home-grown energy solutions
  - Increased demand for biofuels- Nebraska has the 4<sup>th</sup> largest amount of crop residue in the country (NREL)
  - Capitalize on Nebraska's wind resources-Nebraska is the 6<sup>th</sup> windiest state in the nation
  - Provide more options for power generation
- Revitalize Nebraska's economy through the development of thousands of new green jobs in the agricultural, manufacturing and services sectors.



## Opportunities for Advanced Low- Carbon Technologies



## Cap and Trade will direct billions of dollars towards the development of low-carbon technologies.



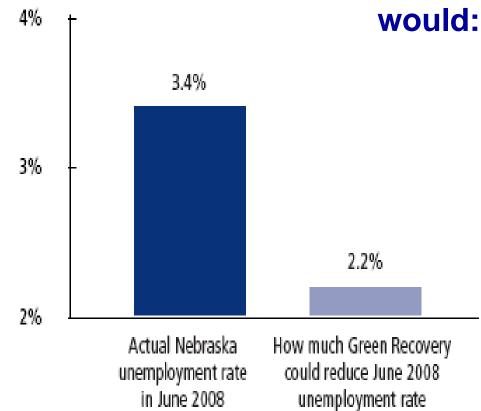
**Offsets:** Farmers can get paid for deploying low-carbon practices, such as no-till farming

## **Green Recovery for Nebraska**

Nebraska unemployment rate



# A national green recovery program investing \$100 billion into global warming solutions over two years



- Direct **\$581 million** of the investments at Nebraska\*
- Create 12,766 new green jobs
- Potentially **reduce the unemployment rate** from
  3.4% to 2.2%

## **Types of Jobs Created**



	GREEN	INVEST	MENTS	AND	JOBS
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STRATEGIES FOR GREEN ECONOMIC INVESTMENT	REPRESENTATIVE JOBS
Building Retrofitting	Electricians, Heating/Air Conditioning Installers, Carpenters, Construction Equipment Operators, Roofers, Insulation Workers, Carpenter Helpers, Industrial Truck Drivers, Construction Managers, Building Inspectors
Mass Transit/Freight Rail	Civil Engineers, Rail Track Layers, Electricians, Welders, Metal Fabricators, Engine Assemblers, Bus Drivers, Dispatchers, Locomotive Engineers, Railroad Conductors
Smart Grid	Computer Software Engineers, Electrical Engineers, Electrical Equipment Assemblers, Electrical Equipment Technicians, Machinists, Team Assemblers, Construction Laborers, Operating Engineers, Electrical Power Line Installers and Repairers
Wind Power	Environmental Engineers, Iron and Steel Workers, Millwrights, Sheet Metal Workers, Machinists, Electrical Equipment Assemblers, Construction Equipment Operators, Industrial Truck Drivers, Industrial Production Managers, First-Line Production Supervisors
Solar Power	Electrical Engineers, Electricians, Industrial Machinery Mechanics, Welders, Metal Fabricators, Electrical Equipment Assemblers, Construction Equipment Operators, Installation Helpers, Laborers, Construction Managers
Advanced Biofuels	Chemical Engineers, Chemists, Chemical Equipment Operators, Chemical Technicians, Mixing and Blending Machine Operators, Agricultural Workers, Industrial Truck Drivers, Farm Product Purchasers, Agricultural and Forestry Supervisors, Agricultural Inspectors

Source: University of Massachusetts- Amherst

#### **Take Home Points**





Four big problems: economic slump, high energy prices, oil addiction, global warming

One solution: Repower America with clean energy



Solving global warming is practical and affordable. In fact, what we can't afford is to ignore the problem



Millions of green jobs will be created building the clean energy economy, using skills workers already have



A federal cap and trade with provisions to support efficiency and innovation is the best way to drive the emission reductions we need

## Warming won't wait. Will we?



