# Cap-and-Trade 101

How California's Carbon Market Works

#### **CAP-And-Trade**

- California rolls out the heavy artillery in its attack on climate change with a program called "cap-andtrade."
- It's like a stock exchange for carbon emissions, where the state's biggest polluters have to buy the right to emit greenhouse gases. It's the most ambitious climate change policy in the country, but not everyone is happy with it.

### So how does it work?

\* The first part is the cap. Until now, businesses haven't had to worry about how much carbon they emit from burning fossil fuels. Now, there is a cap on total emissions. At first, they were able to emit about as much carbon as they have been. But then, the cap on emissions begins to come down.

# So how does it work?

- More than 300 businesses, from power companies and oil refiners, to glass makers and food processors, are required to participate in the cap-and-trade program.
- The government could tell each company how much it's allowed to pollute, or set a tax on carbon. But California's doing it differently by creating a market. That's where the "trade" part of cap and trade comes in.

# So how does it work?

- In order to keep up with the lowering emissions cap, businesses have three choices. The first is pretty straightforward: reduce emissions.
- The second option is to buy permits to pollute. The state will give companies allowances — each allowance grants a company permission to emit one ton of carbon dioxide. Companies can buy and sell allowances on the carbon market.
- And the third option is known as "carbon offsets." Companies can essentially pay other organizations to reduce greenhouse gases, for instance, by protecting forests. Each offset counts toward the firm's compliance obligation, though companies are limited in how many offsets they can use.

#### Cap-And-Trade

#### How California's cap-and-trade will work

Rather than having a strict government mandate, like a carbon tax, to reduce pollution, a cap-and-trade system uses market mechanisms to reward companies that figure out ways to reduce pollution below the level the government sets. California's cap-and-trade rules, which will affect oil refineries, power plants and large factories, take effect Jan. 1.



#### But will it work?

\* California has been preparing for this moment for a long time. When Governor Arnold Schwarzenegger signed AB 32, the state's landmark global warming bill in 2006, he set an ambitious goal: to cut California's greenhouse gas emissions 30 percent by 2020. Capand-trade is supposed to help accomplish a big part of that goal.

#### **Business** Concerns

- "I am very very worried about this program," says Dorothy Rothrock from the California Manufacturers and Technology Association, which represents about 700 companies. Her members are concerned that cap-andtrade will put them at a disadvantage to companies outside of the state.
- And Rothrock says the costs will eventually be passed on to consumers. For instance, the price of gas may go up.
  "It's not like they're suddenly gonna see a big bill in their mailbox the next day, but the costs will be coming and there won't be a lot we can do to stop it," she says.

#### **C-N-T Solutions**

\* California has taken steps to minimize this impact. At first, nearly all of the allowances are free for businesses, and some of the proceeds from the carbon market will go to communities hardest hit by pollution. Regulators also argue that the gains in energy efficiency spurred by the program will outweigh any higher costs.

# So what did California do with that \$1.4 billion in cap-and-trade money?

 It went to electric car buyers, people who installed solar panels on their roofs, and local governments that added transit lines, according to the state's annual report on its cap-and-trade program



Figure 2: Cumulative State Auction Proceeds and Appropriations



#### California Dream!



#### Utopia Much???

\* By 2030, according to the figure from the report below, Californians will be living in a green wonderland of bikes, trains, and swoopy architecture. On the downside, everyone will have turned into stick figures.

# Questions?

