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LESSON PLANS (Student Handout 2 of 4)

Title: EU Climate Change Policy

Section 2- EU Domestic Policy

European Union Domestic Climate Goals

Introduction:

Since 1990, the EU has made it a key priority to become the world leader in reducing greenhouse gas emissions (GHG) and transitioning to a low-carbon clean (green) economy. The task has proven to be extremely complicated, yet the EU has formulated a substantive plan, with all 28 member states, to combat climate change. While huge challenges exist within the EU such as the euro-fiscal crisis, and the refugee crisis, climate change is often regarded as an example where the EU can act as a collective voice; a voice that together has become a powerful example for the world to follow.

According to the EU "Adaptation strategies are needed at all levels of administration: at the local, regional, national, EU, and also the international level. Due to the varying severity and nature of climate impacts between regions within Europe, most adaptation initiatives will be taken at the regional or local levels. The ability to cope and adapt also differs across populations, economic sectors, and regions within Europe."[1]

This section will focus on two areas. The first section will concentrate on the short (2020), medium (2030), and long-term (2050) plans developed by the EU to tackle climate change. The second section will focus on the European Union Emissions Trading System (ETS), which is a cap and trade system which prices carbon. [2]

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[1] *EU Climate Change Policies and Adaptation.* 2016. http://ec.europa.eu/clima/policies/adaptation/index_en.htm (accessed 03 20, 2016).
[2] Ibid

Short (2020)-Medium (2030)-Long (2050) Term Goals of the EU:

2020 Climate and Energy Package

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2030 Climate and Energy Framework

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2050 Low Carbon Economy

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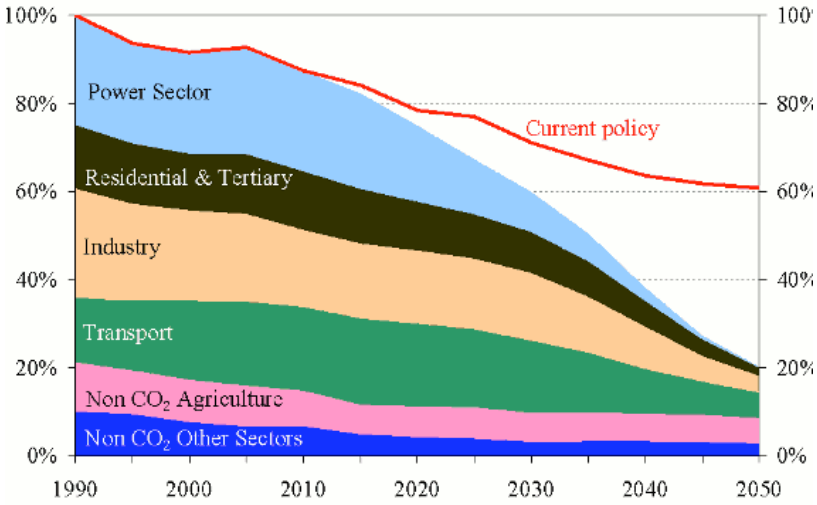
All of Europe's major sectors must contribute to the decline in GHG (chart below)



(Source- European Union)[3]

Power: Can totally eliminate GHG by 2050. Electricity can replace fossil fuel and renewable energy.

Transport: Can reduce 60%. Hybrid and electric cars will require investment and development.

Buildings: Houses and office buildings can reduce their footprint by 90%. This includes remodeling homes with renewable sources.

Industry: Can cut emissions by 80% by 2050. Carbon capture technology will play a big part after 2035.

Agriculture: Will rise 33% by 2050. Reducing technology will be vital to reducing the GHG footprint.

Total investment by 2050: The EU will need to invest $270 billion annually (1.5 GDP) annually over the next 40 years, to achieve these results.[4]

ETS

What is the European Union Emissions Trade System (ETS)?

The European Union Emissions Trade System System (ETS) reduces industrial greenhouse gases. It is a cap and trade system.

A cap is set on the total amount of certain greenhouse gases that can be emitted by installations covered by the system. The cap is reduced over time so that total emissions fall.

Within the cap, companies receive or buy emission allowances which they can trade with one another as needed. They can also buy limited amounts of international credits from emission-saving projects

[3] *EU Climate policies and strategies for 2050.* 2016. http://ec.europa.eu/clima/policies/strategies/2050/index_en.htm (accessed 03 20, 2016).

[4] *EU Climate policies and strategies for 2050.* 2016. http://ec.europa.eu/clima/policies/strategies/2050/index_en.htm (accessed 03 20, 2016).

around the world. The limit on the total number of allowances available ensures that they have a value. After each year a company must surrender enough allowances to cover all its emissions, otherwise heavy fines are imposed. If a company reduces its emissions, it can keep the spare allowances to cover its future needs or else sell them to another company that is short of allowances.[5]

Trading brings flexibility that ensures emissions are cut where it costs least to do so. A robust carbon price also promotes investment in clean, low-carbon technologies.[6]

How does ETS work?

How will the ETS reduce GHG?

Problems Associated with ETS?

[5] *European Union Climate Change Policy- ETS.* 2016. http://ec.europa.eu/clima/policies/ets/index_en.htm (accessed 03 20, 2016).
[6] *Ibid*

GHG Covered Under the ETS

Greenhouse gases and sectors included

- **Carbon dioxide (CO_2) from**
  - Power and heat generation
  - Energy-intensive industry sectors including oil refineries, steel works and production of iron, aluminium, metals, cement, lime, glass, ceramics, pulp, paper, cardboard, acids and bulk organic chemicals
  - Commercial aviation
- **Nitrous oxide (N_2O)** from production of nitric, adipic, glyoxal and glyoxlic acids
- **Perfluorocarbons (PFCs)** from aluminium production

Picture source [7]

Section 2 Video(s):

EU 2030 Climate Change Goals

Explaining ETS

[7] *European Union Climate Change Policy- ETS.* 2016. http://ec.europa.eu/clima/policies/ets/index_en.htm (accessed 03 20, 2016).

Section 2 Key Terms:

ETS

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Example-Poland and Germany are allowed to emit 200,000 combined grams of pollution per day. Poland would like to emit 125,000; therefore they can buy 25,000 from Germany. Germany would produce 75,000, Poland 125,000, but still stay at the limit of 200,000 combined.

Carbon Pricing

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Capital

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Section 2 Activity:

While the ETS is paramount to the EU's environmental strategy, it can be very complicated to maneuver. Trading and pricing carbon is no easy feat when some countries are rich (Germany, Sweden) and some countries are poor (Greece, Eastern Europe).

Step 1:
Split the students into groups of 5. Each group will represent one of the following countries:

Germany, Italy, Greece, Hungary, Sweden

Step 2:

Each country will receive a certain amount of credits (emissions) based on their population size.

One credit is worth a million euros.

Germany=100 credits, Italy=80, Greece=60, Sweden=40 Hungary=20 **Total=300**

Step 3:

Come up with different scenarios where you have to buy and trade credits. The class must negotiate with one another to keep the total credits under **300**.

Example:

Germany has announced it will invest in a green energy project, therefore cutting its emissions by 20 credits. How will it invest in this project?

Use the following as examples:

- Germany would like to sell 20 credits by investing in green energy

- Hungary would like to increase their emissions by 5 credits

- Italy would like to increase their emissions by 10 credits

- Sweden would like to decrease their emissions by 5 credits

What can Greece do? Can Hungary purchase credits from Germany?

Remember 1 credit is worth a million euros!

Play around with different scenarios. Try and figure out what countries would want to sell or purchase GHG credits. Also, every year the total GHG credit diminishes and the value of them falls, countries would have an incentive to sell them off, because they would be worth less!