

TRANSITIONING TO A NET ZERO ECONOMY

What tradeoffs do governments face when making sustainable environmental policy?

<p>C3 Framework Indicator</p>	<p>D2.Civ.13.9-12. Evaluate public policies in terms of intended and unintended outcomes, and related consequences.</p> <p>D2.Civ.14.9-12. Analyze historical, contemporary, and emerging means of changing societies, promoting the common good, and protecting rights.</p>	
<p>Staging the Compelling Question</p>	<p>This inquiry focuses on the impact of public policy choices made by Germany as it balances its long-term goals of achieving Net Zero with the immediate impact on Germans of rising energy costs stemming from conflict with Russia.</p>	
<p>Supporting Question 1</p>	<p>Supporting Question 2</p>	<p>Supporting Question 3</p>
<p>How does a production possibilities curve explain the choices and tradeoffs faced by an economy?</p>	<p>What unintended outcomes stem from Germany’s political relationship with Russia and China?</p>	<p>How challenging is it for countries like Germany to transition towards an environmentally sustainable economy?</p>
<p>Formative Performance Task</p>	<p>Formative Performance Task</p>	<p>Formative Performance Task</p>
<p>Students will complete Module 2: Choice in a World of Scarcity, reading the assigned article, watching the assigned video and completing the practice questions.</p>	<p>Students will watch the DW News video “How Germany wants to turn away from China and Russia” and complete a Cause-and-Effect graphic organizer about German foreign policy decisions.</p>	<p>Students will read about the Net Zero Coalition of which Germany is a part and read an article focusing on Germany’s recent decision to begin using its coal plants again in the wake of its energy crisis.</p>
<p>Featured Sources</p>	<p>Featured Sources</p>	<p>Featured Sources</p>
<p>Source A: Lumen Learning Macroeconomics Course Module 2: Choice in a World of Scarcity</p>	<p>Source A: Graphic Organizer Source B: DW News “How Germany wants to turn away from China and Russia” YouTube</p>	<p>Source A: “United Nations For a livable climate: Net-zero commitments must be backed by credible action” Net Zero Coalition Source B: “All Things Considered Amid an energy crisis, Germany turns to the world’s dirtiest fossil fuel” NPR</p>
<p>Summative Performance Task</p>	<p>Argument: Students will simulate an environmental summit and present their respective white papers as their assigned stakeholders with the goal of creating a cohesive vision for future environmental policies that either chooses to adopt Net Zero or abandon it.</p> <p>Extension: Students should research the steps taken by local and state/provincial governments to transition towards limiting its reliance on fossil fuels.</p>	
<p>Taking Informed Action</p>	<p>Understand: Germany, like other countries committed to environmental sustainability, faces political and infrastructure challenges to achieving Net Zero emissions.</p> <p>Assess: Apply economic concepts to real-world problems.</p> <p>Act: Decide whether German policy decisions are more sustainable when compared with local environmental initiatives.</p>	

COMPELLING QUESTION:

What tradeoffs do governments face when making sustainable environmental policy?

Target Grade Level: 10th – 12th Grade

Target Course(s): Economics, AP Macroeconomics

INQUIRY OVERVIEW:

This inquiry focuses on contemporary German economic policies and how they relate to basic economic concepts including opportunity costs and production possibilities. Students will work towards answering the following compelling question: What tradeoffs do governments face when making sustainable environmental policy? After gaining background information on the relevant economic topics and current events, students will be assigned to represent a contemporary German stakeholder and write a white paper that addresses their position on Net Zero commitments. Students will present their white papers as their stakeholders in a simulation that decides whether to reaffirm Germany's commitment to a Net Zero economy or make tradeoffs.

TEACHER BACKGROUND INFORMATION:

Germany is a leader in creating sustainable environmental policies as evidenced by the widespread popular support of its Green movement in the 1980s. As the global energy crisis worsens and mounting evidence demonstrates the role of humans in global climate change, Germany has made commitments towards transitioning to more sustainable economic policies and is a member of the United Nations Net Zero Coalition, a group of more than 140 nations committed to cutting greenhouse gas emissions to as close to zero as possible. Nonetheless, local and international realities, including rising energy costs and the Ukraine-Russia War, which has impacted Germany's energy supplies, have forced local policy makers to increase the use of fossil fuels despite their international commitments. This lesson allows students who may themselves support sustainable energy policies to learn more about the challenges and tradeoffs policy makers face as they decide what economic policies are best for their constituents.

For further information see:

"Germany: Minister casts doubt on 2030 coal exit." *Deutsche Welle*, 1 Nov. 2023, <https://www.dw.com/en/germany-minister-casts-doubt-on-2030-coal-exit/a-67277584>.

SUGGESTED TIME FRAME:

Three to five 50-minute class periods, depending on school policies related to homework.

CONCEPT LIST:

- Sustainability
- Net Zero
- Production Possibilities Curve
- Tradeoffs
- Opportunity Costs
- Green Party
- Social Democrats
- Free Democratic Party
- Alternative for Germany Party

INSTRUCTIONAL RESOURCES:

- **Graphic Organizer - Historical Concepts: Cause and Effect in Context** (attached at end of lesson)
- DW News. "How Germany Wants to Turn Away From China and Russia | DW News." *YouTube*, 16 Sept. 2022, www.youtube.com/watch?v=7wH2NDdk8Uo.
- Schmitz, Rob. "Amid an Energy Crisis, Germany Turns to the World's Dirtiest Fossil Fuel." *NPR*, 27 Sept. 2022, www.npr.org/2022/09/27/1124448463/germany-coal-energy-crisis.
- "The Production Possibilities Frontier." Lumen Learning, <https://courses.lumenlearning.com/wm-macroeconomics/chapter/the-production-possibilities-frontier/>.
- United Nations. "Net Zero Coalition | United Nations." *United Nations*, www.un.org/en/climatechange/net-zero-coalition.

INTRODUCTORY ACTIVITY/HOOK/DISCUSSION:

Setup the classroom for a four-corners activity (place a Strongly Agree, Agree, Disagree, and Strongly Disagree signs in four corners of the classroom). Read aloud the following statements and allow students to discuss their decisions for two to three minutes for each statement:

- Climate change is the most serious threat to human existence.
- Society is taking serious actions to reduce the impact of human actions on climate change.
- The best way to reduce carbon emissions is through individual actions like taking the bus to school, walking, or riding a bike instead of driving.
- The end to relying on fossil fuels as energy sources is near.

SUPPORTING QUESTION #1:

How does a production possibilities curve explain the choices and tradeoffs faced by an economy?

► Formative Performance Task #1:

Students will complete Module 2: Choice in a World of Scarcity, reading the assigned article, watching the assigned video and completing the practice questions featured in the module.

► Featured Sources #1 (MLA citations):

"The Production Possibilities Frontier." Lumen Learning, <https://courses.lumenlearning.com/wm-macroeconomics/chapter/the-production-possibilities-frontier/>.

SUPPORTING QUESTION #2:

What unintended outcomes stem from Germany's political relationship with Russia and China?

Students will watch the DW News video "How Germany wants to turn away from China and Russia" and complete a Cause-and-Effect graphic organizer about German foreign policy decisions.

► Featured Sources #2 (MLA citations):

- **Graphic Organizer** (attached at end of lesson)
- DW News. "How Germany Wants to Turn Away From China and Russia | DW News." *YouTube*, 16 Sept. 2022, www.youtube.com/watch?v=7wH2NDdk8Uo.

SUPPORTING QUESTION #3:

How challenging is it for countries like Germany to transition towards an environmentally sustainable economy?

► Formative Performance Task #3:

Students will read about the [Net Zero Coalition](#) of which Germany is a part and read an [article](#) focusing on Germany's recent decision to begin using its coal plants again in the wake of its energy crisis.

► Featured Sources #3 (MLA citations):

- Schmitz, Rob. "Amid an Energy Crisis, Germany Turns to the World's Dirtiest Fossil Fuel." *NPR*, 27 Sept. 2022, www.npr.org/2022/09/27/1124448463/germany-coal-energy-crisis.
- United Nations. "Net Zero Coalition | United Nations." *United Nations*, www.un.org/en/climatechange/net-zero-coalition.

SUMMATIVE PERFORMANCE TASK — ARGUMENT OPTION (ESSAY OR PRESENTATION):

Create a white paper that represents the perspective of an assigned stakeholder in Germany that discusses the tradeoffs involved with increasing coal usage despite its international commitments to Net Zero. Students will simulate an environmental summit and present their respective white papers as their assigned stakeholders with the goal of creating a cohesive vision for future environmental policies that either chooses to adopt Net Zero or abandon it.

Extension Option (Choice of Creative Format instead of Argument):

Students should research the steps taken by local and state/provincial governments to transition towards limiting its reliance on fossil fuels.

Taking Informed Action:

Understand: Germany, like other countries committed to environmental sustainability, faces political and infrastructure challenges to achieving Net Zero emissions.

Assess: Apply economic concepts to real-world problems.

Act: Decide whether German policy decisions are more sustainable when compared with local environmental initiatives.

MODIFICATIONS FOR DIFFERENTIATION:

Students that are more averse to public speaking can create an installation reflecting their white paper, a social-media reel from the perspective of their assigned stakeholder, or pre-recorded video presenting their argument to be played at the summit.



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