

**WHAT'S IN AN ENERGY BILL – PART 2 may advance the following  
NEXT GENERATION HIGH SCHOOL SCIENCE STANDARDS**

**ENERGY**

Students who demonstrate understanding can:

**HS-PS3-1.** Create a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known.

**HS-PS3-3.** Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.

**INETERDEPENDENT RELATIONSHIPS IN ECOSYSTEMS**

Students who demonstrate understanding can:

**HS-LS2-7.** Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.

**EARTH'S SYSTEMS**

Students who demonstrate understanding can:

**HS-ESS2-2.** Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems.

**HS-ESS2-6.** Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.

**WEATHER AND CLIMATE**

Students who demonstrate understanding can:

**HS-ESS2-4.** Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.

**HUMAN SUSTAINABILITY**

Students who demonstrate understanding can:

**HS-ESS3-1.** Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.

**HS-ESS3-2.** Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.

**HS-ESS3-4.** Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.

## **ENGINEERING DESIGN**

Students who demonstrate understanding can:

**HS-ETS1-1.** Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.

**HS-ETS1-2.** Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.

**HS-ETS1-3.** Evaluate a solution to a complex real-world problem based on prioritized criteria and tradeoffs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.

**HS-ETS1-4.** Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.