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Fixed and Variable Subsidies for Renewable Energy Producers: Two Policy Tools

What is a subsidy?

In general, a subsidy occurs when a governing body gives an economic "boost" to a specific segment of society in order to promote a desired outcome. Subsidies are a common public policy tool. Examples include free or reduced price meals for schoolchildren, tax abatements for specific businesses, and direct cash payments to Minnesotans turning corn into ethanol.

How many states subsidize renewable energy producers?

Focusing specifically on renewable transportation fuel, Minnesota is one of 21 states that subsidize producers of biofuels—mainly ethanol and biodiesel. State support is generally in the form of cash payments or tax breaks tied to the number of gallons produced.

Why do governments subsidize renewable energy producers?

Proponents argue that subsidies are necessary to:

- provide startup financing not otherwise available in the private financial markets;
- aid the development and growth of promising renewable industries until they can compete on a price basis with established energy technologies like gasoline produced from petroleum or electricity created by burning coal; and
- fully compensate renewable energy producers for the environmental and energy security benefits they provide.

Opponents counter that:

- the marketplace, not government, should decide which energy projects are worthy of investment; and
- environmental and energy security benefits are debatable and difficult to measure.

What are fixed and variable subsidies?

Fixed subsidies provide a consistent level of financial support from one period to the next. An example is Minnesota's ethanol producer payment program, enacted in 1986. In general, eligible producers have received, and some continue to receive, 20¢ per gallon for a portion of their annual ethanol production.

Variable subsidies, by contrast, can vary from period to period based on the current economic health of the industry. When times are tough, the government provides assistance to keep the companies afloat; when times are good, little or no support is extended. Variable subsidies are a component of federal farm policy. The U.S. Department of Agriculture calculates counter-cyclical deficiency payments using the relationship between market and "target" prices for covered crops. If the market price is below the target price, the government pays farmers the difference.

What are the potential advantages and disadvantages of each?

Fixed subsidies are predictable from one period to the next, making them easier to administer and budget. However, fixed subsidies do not account for any change in the subsidized industry's viability. For example, fixed subsidies may continue once the industry's fortunes have improved and the industry is profitable without government support.

Fluid by design, variable subsidies react to current conditions and may provide a superior level of support for renewable energy producers and investors at a lower cost to taxpayers. However, variable subsidies are more complex to budget and administer. Depending on how the policy is designed, variable subsidies may further distort economic decision making or fail to provide adequate support for less competitive renewable energy projects.

Are there any states that use variable subsidies for biofuels?

In 2003, North Dakota enacted the nation's only market-based variable subsidy for ethanol producers. Payments are calculated using a formula that estimates the current profitability of eligible ethanol plants.

Each quarter, North Dakota's Agricultural Products Utilization Commission compares the market prices of ethanol and corn with target prices established by law. When ethanol prices are low and/or corn prices are high for the period, eligible plants receive a subsidy payment. When prices are favorable, no support is provided.

For more information: Contact legislative analyst Colbey Sullivan at 651-296-5047. For more on renewable energy subsidies and a hypothetical illustration of the cost and performance of fixed and variable subsidies for ethanol producers, see the House Research publication *Designing Incentives for Renewable Energy Producers: Fixed v. Variable Subsidies*, January 2007.