

The Bio-Fertilizer Production Act

Promoting independence for American farmers

Objective

To help build three (3) pilot facilities to produce ammonia-based fertilizer (NH₃) for our nation's crops using renewable energy to help insulate our agricultural markets and overall economy from supply disruptions and severe price increases of fossil fuels.

Description

The ABFPA will provide \$325 million over a three (3) year period for three (3) test projects in the Great Lakes and Great Plains regions, and will be administered by the USDA. This legislation will provide low-interest / no-interest loans for producing ammonia fertilizer with wind power via hydrogen (H₂) electrolysis and in a manner that enhances grid stability, in retrofitted abandoned manufacturing facilities in Ohio, New York and/or Indiana.

Each test facility will produce 45MW delivered of renewable electricity (about 110 to 135 MW of wind turbine capacity) and store H₂ to allow for variable electricity consumption with constant NH₃ production; the variable electricity consumption will be tailored to use non-peak electricity, or less electricity during peak grid demand periods. Each test facility will generate 40 to 50,000 tons of NH₃ annually, generating \$20 million revenue (at \$400/ton NH₃).

This legislation will provide:

- *Funding for the establishment of a wind turbine construction facility in the Great Lakes and Great Plains regions to support these test facilities.*
- *Indirect funding for the electricity source via community/regional owned electricity generation by tender using 20-year terms for Power Purchase Agreements*
- *Low cost Clean Renewable Energy Bonds or municipal bond financing with bond guarantees and insurance for purchase of the electricity generation system.*
- *Funding of an H₂ storage system to allow the 110-135 MW of electrical generation capacity, which will consume less electricity in peak times or low wind time,s and more electricity in non-peak or-high wind periods.*
- *Design of NH₃ production facilities based on pure H₂ sources (including design via National Renewable Energy Laboratory guidance/review), allowing higher productivities, improved catalyst activity versus conventional fossil fuels H₂ sources.*

- *Low cost funding for the hydrogen and ammonia production facility design and construction and long term purchasing agreements form the product(s).*
- *Operating subsidies, which are a function of the price of NH3 fertilizer and natural gas price, will be discontinued when natural gas prices exceed \$15/MBtu.*
- *Obtain long term sales agreements for the produced ammonia for agricultural uses, which will provide crop production security from natural gas price spikes*

Benefits

This legislation will

1. Begin providing agricultural areas with dependable supplies of domestically-made NH3, at stable and predictable prices.
2. Spur the development of public and private expertise and capabilities in renewable energy for design, construction, installation and maintenance of these systems.
3. Reduce natural gas consumption by 2,250 million standard cubic feet (scf) per year per plant, or a total of 6.75 billion scf per year for all three facilities generating 50,000 tons of NH3 annually.
4. Create new jobs and help revive the domestic fertilizer and heavy manufacturing industries.

Investment

\$325 million over a three year period, with \$100 million per year invested in each plant, and \$25 million for program management.

Key Messages

1. Begins to free agricultural production from vagaries of natural gas pricing with respect to ammonia production.
2. Promoting stronger economies in rural communities.
3. Provides pricing stability for ammonia, a key input in the production of key crops such as corn and wheat.
4. Demonstrates production of ammonia in a way that does not produce noticeable quantities of CO2 pollution.
5. Provides the basis for a new export industry (renewable NH3 plants, modular in size, and which do not depend upon the use of natural gas, coal or result in CO2 pollution).

