

Frequently Asked Questions

1. Who is Abengoa Bioenergy?

Abengoa Bioenergy (www.abengoabioenergy.com) is one of the largest ethanol producers in the United States and the largest in Europe. Abengoa Bioenergy has recently completed construction and is in the process of starting up two new facilities in the United States, one in Indiana and another in Illinois. When combined with five operating facilities in Europe and a sixth facility in Rotterdam, which will be completed this year, Abengoa Bioenergy's total production capacity will exceed 800 million gallons/year.

Abengoa Bioenergy is one of five divisions of the Spanish public company Abengoa S.A., a technology company applying innovative solutions for sustainable development in the infrastructure, environment and energy sectors. Abengoa S.A. is present in more than seventy countries, where it operates multiple companies within its five business units: solar, bioenergy, environmental services, information technologies and industrial engineering and construction (www.abengoa.com).

2. Who is Mid-Kansas Electric Company?

Mid-Kansas Electric Company LLC (www.midkansaselectric.net) is a coalition of six rural electric cooperatives serving in 34 western Kansas counties that organized for the purpose of acquiring the assets of Aquila's Kansas Electric Network. The owners of Mid-Kansas are Lane-Scott Electric Cooperative, Inc., Dighton; Prairie Land Electric Cooperative, Inc., Norton; Southern Pioneer Electric Company, Ulysses (a wholly-owned subsidiary of Pioneer Electric Cooperative, Inc.); The Victory Electric Cooperative Association, Inc., Dodge City; Western Cooperative Electric Association, Inc., WaKeeney; and Wheatland Electric Cooperative, Inc., Scott City. The cooperatives also own Sunflower Electric Power Corporation, a generation and transmission service provider, along with other businesses that provide a wide range of services including water supplies, satellite TV and Internet access, wireless broadband Internet access, cellular telephone service, commercial electrical services and propane delivery services.

3. What is Abengoa Bioenergy Hybrid of Kansas (ABHK)?

ABHK is an innovative, commercial-scale project that will use renewable resources – primarily corn stover, wheat straw, milo stubble and switchgrass – to help power the Midwest's growing demand for fuel and electricity. Using advanced technologies, ABHK will convert these renewable resources into 15 million gallons of cellulosic ethanol each year and approximately 75 megawatts of renewable electric power.

- 4. What makes the agreement between ABHK and Mid-Kansas Electric a good fit?** Science. Solutions. Service. Together, these companies have formed a unique partnership to develop a sustainable solution to help power Kansas' growing demand for energy using Abengoa Bioenergy's state-of-the-art, integrated bio-refinery technology and Mid-Kansas' service capabilities. Equally important, this partnership project will help strengthen the region's economy, while promoting conservation of the environment.
- 5. Why Hugoton, Kan.?**
Hugoton was selected as the site for this project based on two major local attributes: a significant supply of biomass available and strong local and state support.
- 6. What kind of feedstock will the project use?**
ABHK will use approximately 875,000 tons of feedstock per year, nearly 2,500 tons per day, to fuel its bio-energy development. The breakdown of raw materials is as follows: corn stover (76 percent), wheat straw (15 percent), milo stubble (5 percent) and switchgrass (4 percent).
- 7. How and where will ABHK procure the feedstock?**
ABHK's biomass feedstock needs will be served by producers within a 50-mile radius of the Hugoton plant, specifically Stevens, Seward, Morton, Haskell, Grant, Stanton and Texas County. It is estimated that it will take approximately 300,000 – 350,000 acres of land to meet the plant's biomass demand. Once the biomass is harvested into package form, it will be transported via flat bed trailer to the nearest satellite depot. An estimated 80 percent of the biomass packages will go from the field to the satellite depot for storage and then to ABHK, with the rest going directly from the field to the facility.
- 8. When will the plant be operational?**
The plant is expected to begin producing ethanol and generating electricity in 2012.
- 9. How many megawatts of electricity will be generated by the facility?**
ABHK will produce a total of 115 MW of electricity, of which 75 MW will be purchased by Mid-Kansas Electric to help provide reliable, low-cost power to its customers.
- 10. Where and to whom will the electricity be transmitted?**
The electricity will serve the retail customers of Mid-Kansas Electric located in 34 counties in central and western Kansas.
- 11. What is the projected cost of development and how is it being funded?**
The projected cost of construction is \$550 million, which will be funded by equity provided by Abengoa Bioenergy, a grant of \$76 million from the U.S. Department of Energy to support the commercialization of Abengoa Bioenergy's cellulosic ethanol technology and additional financing through a lender or similar entity.

12. What kind of economic impact will this biomass plant have on the local and state economy?

ABHK is a great example of new energy development stimulating the economy. This \$550 million project will have a significant, positive impact in western Kansas. The projected local economic impact is:

- Nearly 100 full time construction jobs (24 months)
- Approximately 90 well-paying, full-time jobs at the facility
- Estimated 50 – 100 jobs in biomass procurement
- \$17 million in added local income during construction
- \$4.5 million in annual wages after operation commences
- \$3 – \$5 million for local goods, materials and services
- \$13 million for biomass feedstock from local producers
- Significant tax revenue at the local, state and federal level

13. How will this plant help Kansas realize its energy policy goals?

Construction of ABHK is an important part of diversifying our state's energy portfolio and increasing energy independence.

14. How long is the plant expected to operate?

This bio-energy plant is expected to operate 30 to 50 years.

15. How can it be certain that this feedstock will always be available (e.g., in times of drought)?

Abengoa Bioenergy has done extensive investigation of biomass availability and has determined that, given the historical range of production and a diversification of energy crops such as switchgrass as an alternative, there will be sufficient quantity of feedstock to meet demand.

16. If this feedstock is used for fuel, how can it be certain that enough feedstock remains to limit soil erosion?

To prevent soil erosion, Abengoa Bioenergy will closely follow guidelines established by the U.S. Department of Agriculture's Natural Resource and Conservation Service concerning biomass removal rates.

17. What are the next steps in advancing this project?

Abengoa Bioenergy must obtain an air permit from the Kansas Department of Health and the Environment and prepare an Environmental Impact Statement in compliance with the National Environmental Policy Act (NEPA).

18. Will the construction of this plant require new transmission lines?

The electricity generated at ABHK will be distributed to consumers through existing facilities. The project will only require 1.5 miles of new transmission lines.

19. Is electric generation from biomass a commercially viable technology?

Yes. Sensible energy policies that diversify the fuel supply mix, create additional value for renewable electricity and promote energy independence make electric generation from biomass a commercially viable technology.

20. How cost-competitive is biomass generation compared to other energy resources?

Given the diversity of energy resources used in the Midwest, biomass is a cost-competitive source of electricity. Those who rely on our nation's abundant supply of coal still enjoy the most affordable electric rates in the country, while other sources of electricity are more expensive.

21. Is biomass a reliable source of power generation?

Yes. Biomass – as with more conventional fuel resources, such as coal, natural gas and nuclear – is a reliable source of power generation capable of providing baseload capacity to meet demand at any given time.

22. What sort of environmental benefits are realized from biomass generation?

The environmental benefits of electric generation from biomass are significant. Abengoa Bioenergy's sustainable approach to using renewable resources, such as corn stover, wheat straw, milo stubble and switchgrass, means ABHK has the potential to have a carbon neutral footprint.

23. Will the use of biomass have any impact on cost of livestock feed or food prices?

No. Biomass is not a primary feed for livestock and will not impact the cost of food production.

24. Will the construction of this bio-energy plant eliminate the need for the Holcomb Expansion Project?

Construction of ABHK is an important part of diversifying our state's energy portfolio and increasing energy independence, but it will not eliminate the need for the Holcomb Expansion Project. Kansas is blessed with a diversity of energy resources, traditional and renewable, that can and must be used to meet the growing demand for electricity. Once complete, the Holcomb Expansion Project will serve the energy needs of people in central and western Kansas with reliable, low-cost power, while using state-of-the-art technology to protect the environment and creating significant economic opportunities.