



Bioboom overwhelming Ukraine

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Summary

Recently Finish scientists forecast that within the next 20-30 years biofuels replace all other sources. Renewable energy has become big business and is attracting some of the world's largest companies, including General Electric, Siemens, Sharp, and Royal Dutch Shell. Worldwide, renewable energy industries now provide 1.7 million jobs. The biofuel boom worldwide and especially an increasing demand for biofuel consumption in the European Union (EU) create a potential market for biofuel production in Ukraine, which could foster a substantial revival of the Ukraine's agricultural industry in the nearest future.

European Union's swelling demand for biofuels

According to EU requirements the share of biofuels and fuels from renewables to be used by the member countries should reach 2.75% and 5.75% in 2006 and 2010 years accordingly.

Investment banking giant Morgan Stanley predicts a flourishing perspective for the EU biofuels industry, projecting growth in this sector for almost seven times within a ten-year period, from Euro 2.5 billion in 2005 to Euro 16-17 billion by 2015. Morgan Stanley's report released in May 2006 directs attention to an anticipated shortage of diesel refining capacity of 15–20 million tons by 2010, and indicates that blending biodiesel into diesel would help alleviate such a shortage. The report emphasizes that biofuels are at the core of EU energy policy, and notes that development of EU biofuel production is aimed at offsetting an expected 70% import dependency on fossil fuels by 2030. The Morgan Stanley report considers the EU goal of a 5.75% bio component in all transport fuel as both attainable and sufficient to power substantial growth in the sector.

Another reason of the biofuel popularity increasing in Europe is its high environmental friendliness comparing to the conventional diesel fuel. Biodiesel doesn't contain sulphur and aromatic, and it insures the low level of the carbon-dioxide gas emissions. Characteristics like that completely meet the European politics ideology about the vehicles' environmental load decreasing.

Ukraine's renewable energy potential

Ukraine has a significant opportunity to develop an entirely new, highly profitable industry based on the production of efficient, clean and profitable bio-based energy because of the shift in world-wide food and energy economics, and based on its unique land mass and climate to this important region of the world.

The Ukrainian government 1996 program envisioned meeting 10% of Ukraine's total energy and fuel consumption with "non-traditional and renewable energy" by 2010. The country's national energy program presently foresees expanding utilization of renewable sources of energy so that by the year 2010, it will produce the equivalent of more that 10 billion kilowatt/hours of electricity. This is comparable to the goals set by a number of Ukraine's European neighbors. The European Parliament, for example, recently adopted a report calling for an increase of the share of energy from renewables in the European Union from a level of 6% in 2012 to 20% by 2020.

According to the US-Ukraine Foundation review, Ukraine relies on renewable energy sources (such as biofuels, solar, wind, geothermal, biomass and hydropower) for approximately 8% of its electricity generation but less than 3% of its total energy consumption. Roughly 75% of this is derived from large hydropower facilities.

However, the country has considerable renewable energy resources that are presently largely untapped and which – in theory, at least – could satisfy a very substantial portion of its energy needs, particularly if coupled with a comprehensive effort to improve overall energy efficiency.

Considering its size, the Ukrainian agricultural industry presents a tremendous potential for biofuel production. The total territory of Ukrainian land is estimated at 60.4 million hectares valued about 300 billion UAH (60 billion USD). Agricultural land accounts for 41.6 million hectares or 69% of the entire territory. About 80% of agricultural land has been privatized, thus 6.9 million people were entitled for land plots. The average size of a land plot is about 4.1 hectares.

Ukraine is well positioned to grow energy crops commercially. With some of the best farmland in the world, Ukraine has the natural resources to produce a variety of crops that could be used for direct combustion as well as conversion into ethanol and biodiesel fuels.

Industry experts view biofuels large-scale production, usage and exports as a priority for Ukraine's future strategy to decrease its dependency on Russian oil. A number of crops could serve as the basis for a biofuels industry in Ukraine. Analysts singled out rapeseed, a crop with high oil content, as one of the best prospects for biofuels in Ukraine.

Commercially grown energy crops offer a win-win situation. In addition to expanding the agricultural market and economically stimulating rural Ukraine, energy crops production would reduce reliance on energy imports and farmers' vulnerability to speculative seasonal energy prices while yielding fuels that burn cleaner. By tapping its renewable energy base, Ukraine would join a rapidly expanding market for sustainable energy technologies.

Ukraine's biofuel initiatives

In summer 2006 about 30 Ukrainian producers of bio-energy resources and biofuels, and biofuel technology equipment manufacturers decided to integrate into an association Ukrbioenergo. This amalgamation aims to promote biofuel market, as well as to play a leading role in creation of legislative base for biofuels market in Ukraine, to help attract domestic and foreign investments. The association will coordinate its members activity and will provide informational support to producers. It plans to assist in implementation of high-powered biodiesel production project. There is a plan to initiate this kind of production in Kiev to provide the capital of Ukraine with biofuel. Association's Director General is certain that approximately 2 million hectares of land will be used to grow bio-energy resources by the 2010, which is ten times more than today.

Last year was marked by a number of statements by senior officials from the Ministry of Agrarian Policy of Ukraine that in the near future a number of rape processing plants will be launched in every region of the country helping resolve the state energy safety program. It was noted that foreign investors have been actively pursuing opportunities for biodiesel plants construction as they see an alternative fuel production to be a promising market in Ukraine.

To exploit previously approved concept of National Program of Biodiesel Production Development until 2010 (decree #576-p of December 28, 2005) the Cabinet of Ministers of Ukraine endorsed Program of Biodiesel Production Development (decree #1774 of December 22, 2006).

For the past three years an average consumption of diesel in Ukraine amounted to 5 million tons annually, and should reach 7.7 million tons in 2010 based on the Energy Strategy of Ukraine until 2030 ratified by the Cabinet of Ministers decree #145 of March 15, 2006.

In order to insure harvesting about 1870 thousand tons of diesel and 620 thousand tons of fuel are required annually. To produce this amount of fuel Ukraine uses approximately 4.5 million tons of oil major part of which is imported. Constant oil price increases causing both fuel and agricultural produce cost increases discourage from traditional fuel supply.

The program's goal is to increase the level of ecological and energy safety of Ukraine while decreasing country's dependency on oil imports, and to supply agricultural and transportation sectors with biodiesel.

The program's main tasks are:

- establishment of the raw material resources base for biodiesel production;
- establishment of the technical base for rape cultivation, storage and processing;
- development of the standard documentation (in particular, technical conditions) on biodiesel production and usage with further preparation of the corresponding state standards.

The program defines perspectives of rape cultivation by creating regional intensified rape growing zones of 50-70 thousand hectares of winter and spring rape. It envisages a 10% increase of rape planting acreage in Ukraine and 75% of crop usage for biodiesel production. In 3-4 years, the biofuel share of the total diesel fuel volume used in the country should reach 33%.

To reach these objectives, it's necessary to build three biodiesel plants by 2008 and yet 20 plants by 2010 with output ranging 5-100 thousand tons and overall production capacity reaching at least 623 thousand tons of biofuel.

The Program will be implemented in two stages:

- first stage (2007—2008) - establishment of raw material resources base, technical and technological bases for biodiesel production, as well as development of standards for biodiesel production and usage.
- second stage (2008—2010) - implementation of the priority innovation projects for construction of biodiesel plants in the areas of concentrated rape cultivation.

Conclusion

From a technical perspective, renewable energy resources have the near and mid-term potential to meet a significant percentage of Ukraine's energy needs while helping to improve the environment and public health, as well as reducing reliance on unstable and costly imports.

Realizing that potential, though, will require numerous actions including development of a supportive regulatory environment addresses the current problems of corruption and excessive bureaucracy and gives priority to renewable energy development.

This is needed to allow the industry to develop and to encourage products usage and distribution without threat or interference by well-established traditional energy sources and interests.

It is also crucial to provide government support in the form of various tax advantages and preferences as well as financial incentives both to create domestic manufacturing and to encourage using sustainable energy technologies by individuals, businesses and municipalities. These might include an expansion of renewable energy tariffs, long-term purchasing agreements for renewables by state power authorities, and requirements that new cars have dual-fuel capabilities.

Resources

Ministry of Agrarian Policy of Ukraine
<http://www.minagro.kiev.ua/newenglish/index.html>

US-Ukraine Foundation Potential Magazine "Renewable energy in Ukraine"
http://www.usukraine.org/bizlinks/potential_energy.pdf

Arena-Eco Agency For Rational Energy Use And Ecology
<http://www.arena-eco.kiev.ua/index.php.en>

Toplivnaya Alternativa
<http://www.fuelalternative.com.ua/eng/index.phtml>

UkrAgroConsult
<http://www.blackseagrains.net/>

Agro Respectiva

<http://www.agroperspectiva.com/en/>

Upcoming Trade Events (featuring renewable energy sector)

Name: SIMA (largest ag event in Europe featuring renewable energies/biofuels)
Dates: March 4-8, 2007
Place: Paris, France
Website: <http://en.simaonline.com/ExposiumCms/do/admin/visu?reqCode=accueil>

Name: World Biofuels Market, Congress & Exhibition
Dates: March 6-9, 2007
Place: Brussels, Belgium
Website: <http://www.greenpowerconferences.com/wbm/index.html>

Name: Second Fuel Bioethanol Congress in Russia & CIS countries "Fuel Ethanol – 20007"
Dates: April 18-19, 2007
Place: Moscow, Russia
Website: <http://www.biofuels.ru/bioethanol/news/535/>

Name: BLACK SEA GRAIN – 2007 Fourth International Conference
Dates: April 19, 2007
Place: Kiev, Ukraine
Website: <http://www.blackseagrain.net/content/blogcategory/117/96/>

CS Kiev Contact Information

For additional information on the market potential for your product in this industry sector, please contact the U.S. Commercial Service in Ukraine: Mr. Richard Steffens, Commercial Counsellor, and Ms. Irina Dushnik, Commercial Specialist; e-mail: Irina.Dushnik@mail.doc.gov; website: www.BuyUSA.gov/ukraine/en

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