Authors of the project:
Zdravko Bronislav Yosyfovych,
General Director
of LLC “Scientific-production
of Agro-pharmaceutical Institute”
Ph.D., biochemist;
Illychok Bohdan Ivanovych,
Lviv National Polytechnic University
Ph.D, economist

Presentation of the innovative project:

“Construction and exploitation of industrial production complexes
alternative to the oil of the plant liquid fuel (phytofuel) for
carburetor, injector, diesel and turbojet engines on the basis of
sugar plant and distilleries wastes of Lviv region”

Lviv 2015
The aim of the project:

To reduce unemployment among the educated youth with the help of phytofuel industrial production, which is a complete replacement for oil, global stocks of which are exhaustive. General goal dynamically reflects the active impact of the project on the standard of life of region inhabitants. Our project realization will ensure within three years the decrease of the unemployment rate among the youth by means of phytofuel industrial production from the plant raw material, which is annually reproduced. Plant raw material includes sugar beet, sorghum, artichoke, potatoe, mice, wheat, oil radish, mustard, wood cheaps, etc.

Project tasks:

1. To provide the European Union and Ukraine with more higher level of energy and defense security.
2. To develop a complete alternative to oil. To develop patterns and productive technologies of liquid vegetable oil alternative fuel (phytofuel) for carburetors, diesel and turbojet engines.
3. To develop examples of ecologically pure phytofuel, which would not contain pesticides (ethylplump, aromatic hydrocarbons).
4. To ensure professional work for young specialists, to create new working places at the phytofuel industrial plant. 500 persons are planned to be engaged in work.

Project executors:


Technical realization specificity:

Engineering projecting and technologies

Factory production program of the phytofuel industrial manufacturing include daily production of 21 tones of phytofuel. To fulfill that an industrial production complex must have its own powerful plant producing 7 tones of high spirits (“fusel oil”) during one day. Besides the own spirit plant the production site must include 6 more workshops: oil plant with the capacity of 7 tones of oil per day; chemical-technological department for ethyl diethyl ether production, acetone, peroxide and nitro compounds manufacturing; feed plant, which will produce feed for livestock from spirit plant wastes (bagasse), as well as from the oil plant wastes (“zmyh”); detergent plant, which by saponification of vegetable oils will produce different detergents (soaps, shampoos, etc.); ether oil plant for perfumery production of ethanol spirit and flowers. Ether oils are necessary as additions for detergents. Phytofuel plant capacity is 21 tones per day.

This is a scheme of the comlex for industrial production of phytofuel.

Production arrangement

With the financing availability we need 12 months to build 6 workshops of the industrial production complex and 24 months to build powerful spirit plant. After 6 workshops construction it is necessary 4 months to buy the equipment required. Parallel to equipment purchase it is necessary to carry on specialist recruitment, as well as various workers and employees. 250 workers are planning to hire on the plant.

Together with 6 workshop building we need to erect three own petroleum stations in different Lviv regions.
The work of the spirit plant, oil workshop, chemical-technological department and the alternative liquid plant fuel (phytofuel) will perform permanently and throughout a day.

For the effective work on the industrial phytofuel production plants it is necessary to construct a hostel for the plant managers and leading specialists (100 apartments) by every plant.

Moreover, every plant must have one canteen, buffet for nutrition and showers for hygienic staff service.

**Overall cost:** 20,380,000 Euro.

**Terms of realization:** 5 years.

**Financing model** (including the sources of financing, correlation of own and joint investment funds): Drawing of the foreign investors, state capital, local funds. There are no own money.

**Terms of payback and efficiency:** 8.5 years.

Annual production of alternative liquid plant oils for carburater, diesel and turbojet engines, feed manufacturing, detergents, ether oils, oils for treatment beginning from the 5 year of the normal and stable power on the 5,000 hectares of earth will be approximately 322 per cent, which indicates on the big profitability of this sphere of agro-pharmaceutical and agro-industrial production.

**Project preparatory stage, availability of the land.**

Technical economic ground of innovative project has been developed; industrial technologies of phytofuel manufacture for carburater, injector, diesel and turbojet engines, has been worked out; Lands are available in Sambir city, Lviv region (general area 60 ha of non-plough lands in the industrial zone), village of Vuzlove, Radehiv region, lviv region (20 ha of the land for the plant construction), village of Hnizdychiv, Zhydachiv regin of Lviv region (10 ha of non-plough lands).

It is necessary to develop project documentation for the plant construction for phytofuel industrial manufacturing.

**Awaiting result and effects from the project realization**

We wait from the realization of project realization to decrease the number unemployed educated youth in Lviv region; to reduce the quantity of plough lands, which are not used, there are 100,000 ha of them in Lviv region; to raise the level of energetic and defense security of Ukraine and Euro-union, as well as to strengthen Lviv Regional Council capacity concerning due strategic planning of Lviv region development.

- to ensure Euro-union countries and Ukraine higher level of energetic and defense security;
- to develop a complete alternative to oil. To develop the patterns and technologies of alternative to oil liquid plant oil (phytofuel) production for carburater, injector, diesel and turbojet engines;
- to develop ecologically pure phytofuel examples, which would not contain non-plough;
- To ensure young specialists with the qualified work, to create new working places on the phytofuel industrial production complex. 500 persons are planning to receive the work.

Thus, summing up the planned productive activity of “NV AFI” Ltd, it is necessary to mention that total costs together with annual bank percents, which will be returned to the banks, consists of 30,023,990 US dollars. 10 year income from the bio-fuel industrial production will be 118,717,220 US dollars, which proves the necessity of the bio-fuel industrial development, its economic efficiency.