



The Boichemical plant of Kirov is the world's leader of bioenergy. It was founded in 1973 as the largest plant of microbiological industries producing fodder's yeast from hydrolysis of waste wood sawing and woodworking. At present it is the only plant of hydrolytic profile in the world, heading by the candidate of Ecological Science, the honorary chemist, the honorary worker of the forest industry Pateleyev D.N. This enterprise occupies an area of 58 hectares; the number of employees is more than 900 people.

ЗАБОТА ОБ ЭКОЛОГИИ **- приоритетное направление**



Today the Boichemical plant of Kirov became the central link of forming bioenergy's complex in Russia, which is leading by the Federal Center of Development of bioenergy. The research centers, companies and organizations, which are introducing in the exploitation of biotechnology projects successfully, work interconnected.



- ◆ *The biofuel of the standard E-85 is producing at the plant since 2007. All conducted during this time tests of the motor transports showed excellent results. It developed STO for this class of fuel STO11605031-033-2009.*



Side by side with the production of biofuels of motor transport by adding into petrol fuel ethanol, the Boichemical plant produces a new environmentally friendly fuel out of wood pellets, which has emissivity as the coal.



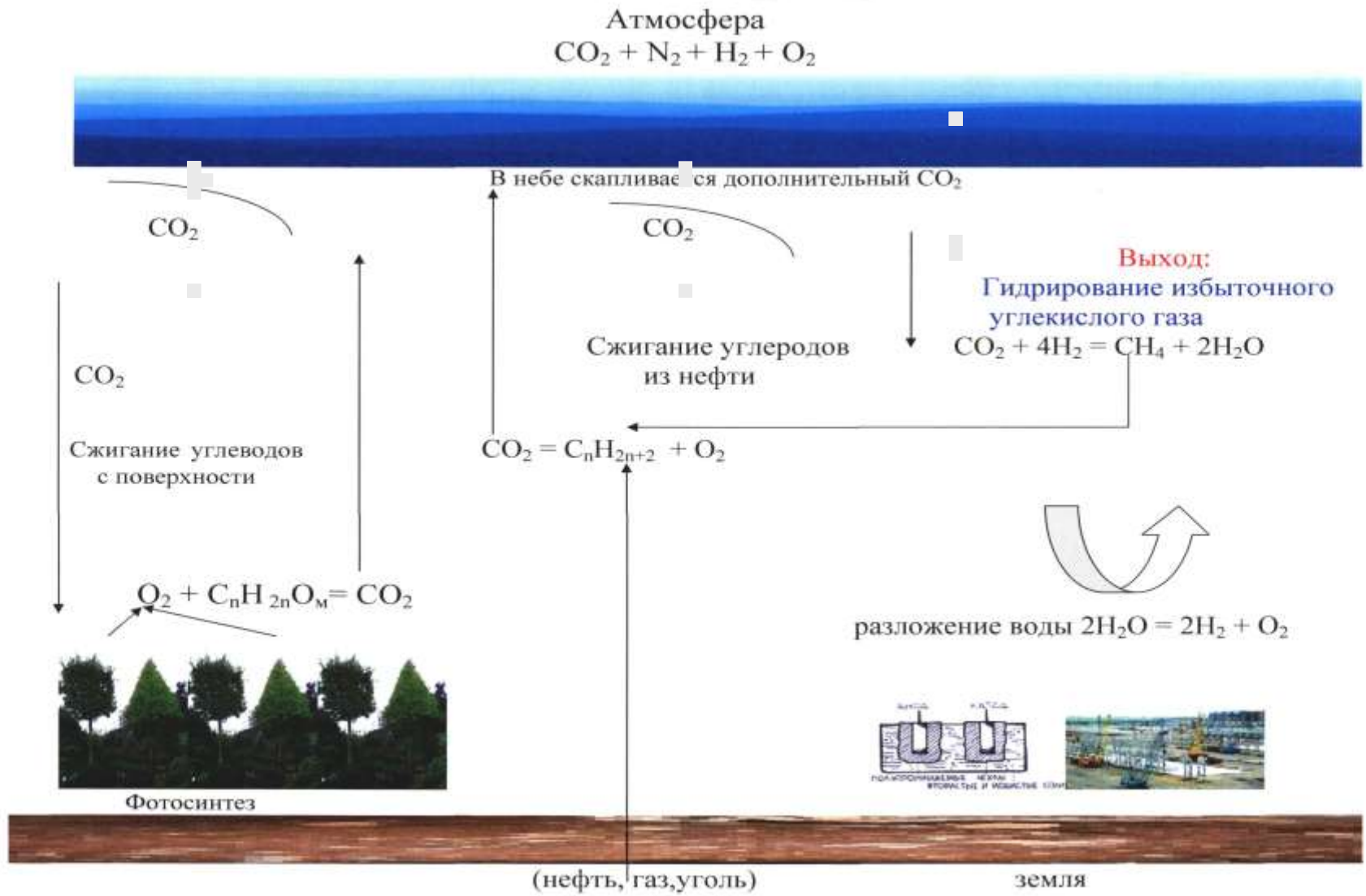
The Boichemical plant of Kirov is able to significantly increase the current production of fodder's yeast, and to bring them up to 60 thousand tons per year. This could prevent the expansion of poorly known and potentially dangerous genetically modified foods and, preserve the health of the nation



- ◆ At the Boichemical plant of Kirov have been developed successfully biotechnology of the production of energy efficiency, which will become the basis of energy future. The plant has all necessary industrial equipment , and new innovative technologies and in the near future it leads its own energy potential of 5 megawatts.



•The project on introduction of technology of hydrogenation of carbonic gas in biogas for the purpose of reduction of influence by environment of emissions from burning of traditional energy sources (oil, gas, coal).

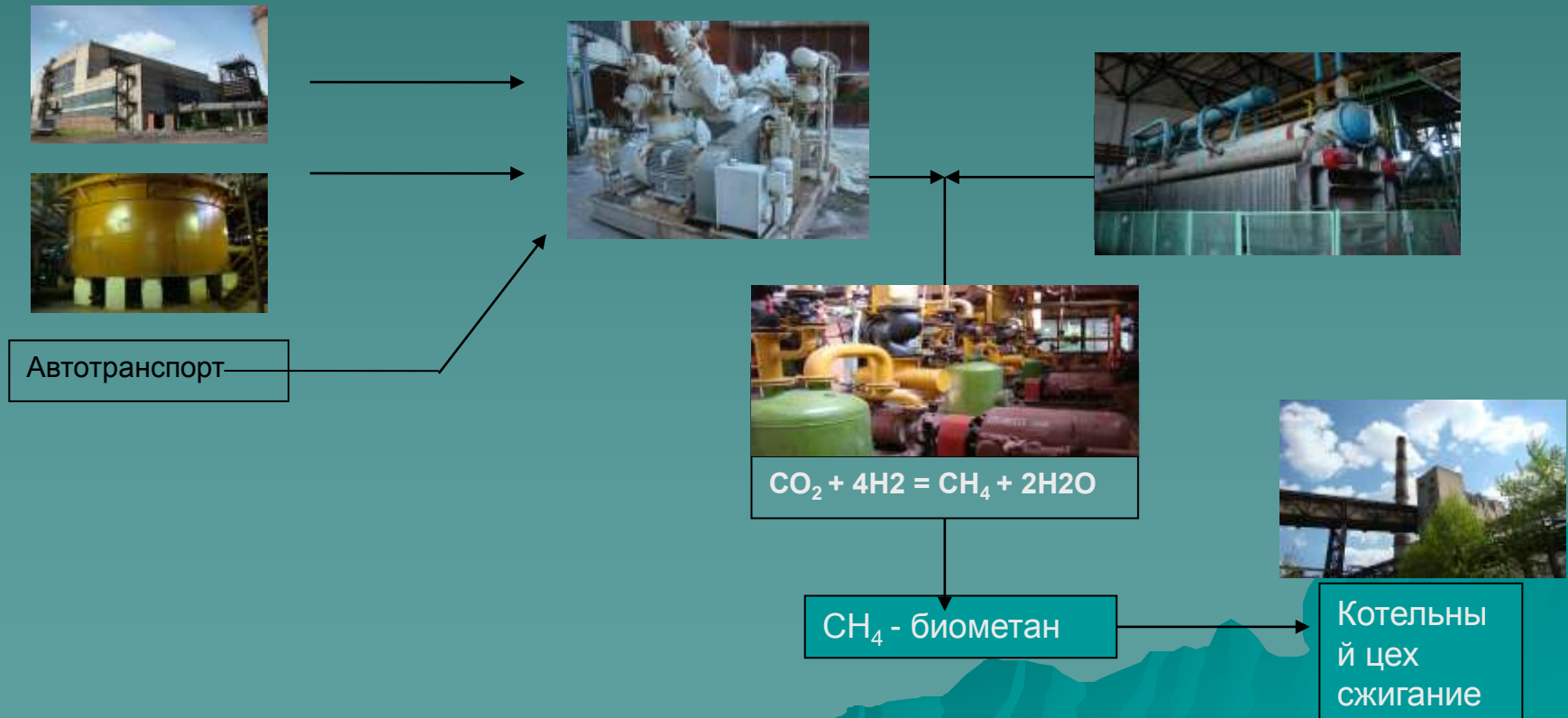


- ◆ The Biochemical plant in Kirov actively leads work on creation of biomethane on the basis of hydrogenation of the carbonic gas formed in the course of fermentation of yeast. This technology allows to receive «green gas». Open Company "Biochemical plant" together with the Russian center of science «Applied chemistry» St.-Petersburg fulfills technology of reception of "green gas» and in the near future can receive 4 million m³ this fuel.

Open Company "Biochemical plant" has the installation of hydrogenation including production of hydrogen by capacity of 37,5 so-called m3/days, and also the equipment necessary for reception of hydrocarbons, including biomethane. The factory independently provides processing of carbonic gas which is formed in production of ethanol and at lignin burning in a factory boiler-house.

80 % of carbonic gas are formed from work of internal combustion engines of motor transport and it is a global problem of car industry. Working off of technology of

hydrogenation of carbonic gas solves this problem



- ◆ Open Company "Biochemical plant" it is ready to industrial production from thrown out thermal power stations of carbonic gas (CO_2) and carbonic oxide (CO), oil formed at burning, gas, coal, biological hydrocarbons formed in internal combustion engines.
- ◆ Reception of "Green gas» (methane) on the basis of hydrogenation of carbonic gas, reduction of emissions CO and CO_2 from motor transport and industrial organizations.

As coauthors of works attraction of GOU VPO «the St.-Petersburg State technological university», FGUP «the Russian center of science« Applied chemistry », Open Society" Криогенмаш ", Open Company« International center of research projects», by GOU VPO «Viatka state university» is planned, Baklanova Julia Olegovna – the director of the International center scientific research projects.

The increase in quantity of the personnel isn't planned

According to a task in view development of engineering procedure with use CO₂ and H₂ will be conducted in a direction of reception of a methanol. Its essence consists in development of a compounding of catalysts, the organization of serial industrial production, development of a design of the reactor and determination of working parameters in the reactor - temperatures, pressure and ratios of initial reagents. The work plan under the project also includes building of shop of reception of liquid carbonic acid CO₂, start-up into work of shop of production of hydrogen as a method электролиза waters and shop building on methane production.

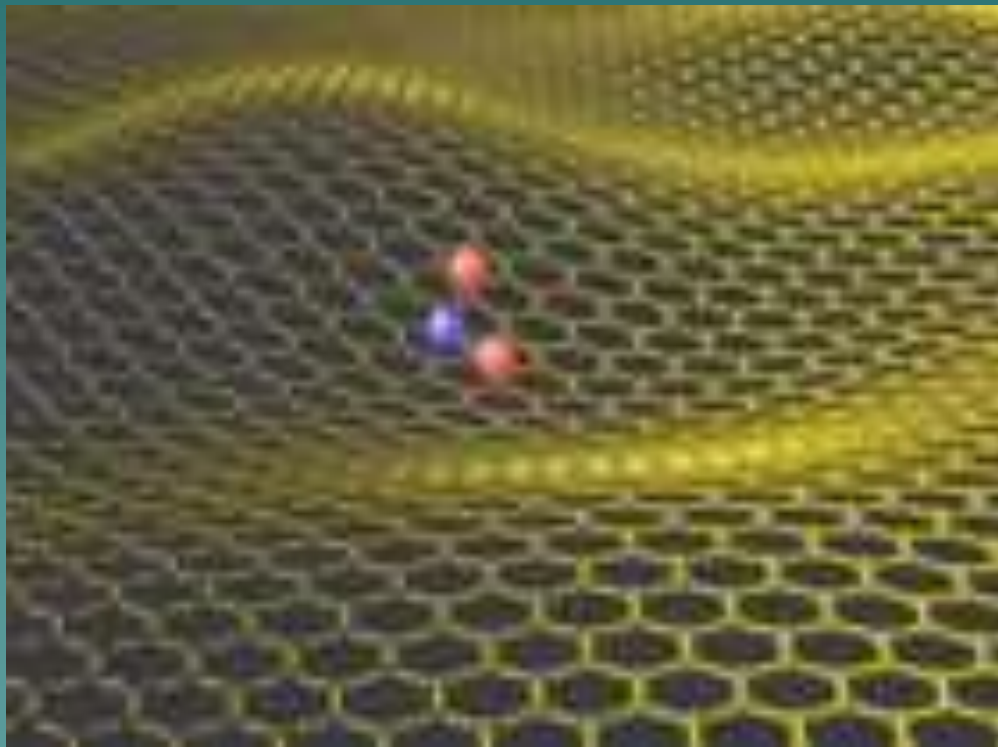


- ◆ The Kirov Biochemical factory prepares for introduction of the new production technology tetragidrofuran, substances which already name one of the basic components for production of hi-tech products. It use at reception grafen. One of the key substances which are taking part in reaction, just also is tetragidrofuran which became claimed today on a cross-border market. But here also the basic hitch is covered: such tetragidrofuran as chemists are expressed, it is astable. That the solution has turned out stable, the basis is necessary furfuril.



- ◆ At factory there are all capacities necessary for it: the equipment on hydrogenation furfural spirit on which at present it is produced furfural. On Kirovsk factory it is possible to produce claimed both a science, and the market substance in a complete cycle.

Negotiations in this direction are led with the American side



Thank you so much!



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