ANNEX 3

ENERGY VALUES OF FUELS AND BIOFUELS USED FOR THE CALCULATION OF THE MANDATORY SHARE OF BIOFUELS IN TRANSPORT

No.	Energy values of petroleum products and biofuels	Q_{Md} -Inferior calorific value – mass (MJ/kg)
1	bioethanol	27
2	bio-ETBE	36 (of which 37 % from renewable sources)
3	biomethanol	20
4	bio-MTBE	35 (of which 22 % from renewable sources)
5	bio-DME	28
6	bio-TAEE	38 (of which 29 % from renewable sources)
7	biobutanol	33
8	biodiesel	37
9	Fischer-Tropsch diesel	44
10	hydrogenated vegetable oil	44
11	pure vegetable oil	37
12	biogas	50
13	motor gasoline	43
14	gas oil	43

ANNEX 4

LIST OF RAW MATERIALS FOR THE PRODUCTION OF BIOFUEL WHOSE CALORIFIC VALUE IS DOUBLE COUNTED

1. Algae if cultivated on land in ponds or photobioreactors.
2. Biomass fraction of mixed municipal waste, but not separated household waste, in accordance with regulations governing waste management.
3. Bio-waste from private households subject to separate collection, in accordance with regulations governing waste management.
4. Biomass fraction of industrial waste not fit for use in the food or feed chain, including material from retail and wholesale and the agro-food and fish and aquaculture industry, and excluding feedstocks listed in items 21 and 22 of this annex.
5. Straw.
6. Animal manure and sewage sludge.
7. Palm oil mill effluent and empty palm fruit bunches.
8. Tall oil pitch (liquid rosin).
9. Crude glycerine.
10. Bagasse.
11. Grape marcs and wine lees.
12. Nut shells.
13. Husks.
14. Cobs cleaned of kernels of corn.
15. Biomass fraction of wastes and residues from forestry and forest-based industries, i.e. bark, branches, pre-commercial thinnings, leaves, needles, tree tops, saw dust, cutter shavings, black liquor, brown liquor, fibre sludge, lignin and tall oil.
16. Other non-food cellulosic material - feedstocks mainly composed of cellulose and hemicellulose, and having a lower lignin content than lingo-cellulosic material, which includes food and feed crop residues (such as straw, stover, husks and shells), grassy energy crops with a low starch content (such as ryegrass, switchgrass, miscanthus, giant cane), cover crops before and after main crops, ley crops, industrial residues (including from food and feed crops after vegetal oils, sugars, starches and protein have been extracted), and material from biowaste.
17. Other lingo-cellulosic material, except saw logs and veneer logs, including material composed of lignin, cellulose, hemicellulose, such as biomass obtained from forests, wood energy cultures and forestry industrial residues and waste.
18. Renewable liquid and gaseous transport fuels of non-biological origin.
19. Carbon capture and utilisation for transport purposes, if the energy source is renewable.
20. Bacteria, if the energy source is renewable.
21. Used cooking oil.
22. Animal fats classified as categories 1 and 2 in accordance with the rulebook governing animal by-products.

ANNEX 5

METHODOLOGY FOR CALCULATING PENALTIES

1. The penalty amount which the reporting entity must pay for the amount of biofuel which he had failed to put on the market in the previous year, [RSD], is calculated according to the following formula:

$$NK = (E_{OB} - E_{BG}) \cdot C_{NK}$$

whereby:
E_{OB} – represents the amount of energy from biofuel which the reporting entity was obliged to put on the market in the previous year, [MJ];
E_{BG} – represents the amount of energy from biofuel which the reporting entity had placed on the market in the previous year, [MJ];
C_{NK} – represents unit amount of the penalty paid by the reporting entities, [RSD/MJ].

2. Unit amount of the penalty paid by the reporting entities, [RSD/MJ], is calculated according to the following formula:

$$C_{NK} = \frac{2 \cdot C_{BG} \cdot K_{DE}}{Q_d}$$

whereby:
C_{BG} – represents the price of biodiesel, type FAME 0°C, calculated as average daily price in the previous year based on spot market prices for the previous year at Rotterdam stock exchange, Germany - FOB, [USD/t], calculated by the ministry based on the data published by Reinfinitiv;
K_{DE} – represents middle exchange rate of the National Bank of Serbia on 30 April of the current year [RSD/USD];
Q_d – represents inferior calorific value of biofuel, which for the purpose of this calculation is 32 000 MJ/t.