Reforming of ethanol in plasma of discharge with gas flow of “tornado” type and ”liquid” electrode VALERIY CHERNYAK, OLEG NEDY-BALIUK, SERGIJ OLSZEWSKI, KYIV NATIONAL TARAS SHEVCHENKO UNIVERSITY, DEPT. OF PHYSICAL ELECTRONIC TEAM — This paper presents the results of experimental and theoretical investigations of the process of non-thermal plasma-assisted reforming of aqueous ethanol solutions in the dynamic plasma liquid system using the DC discharge in a reverse vortex gas flow of tornado type with a “liquid” electrode (TORNADO-LE). Mass-spectrometry of synthesis gas for the ethanol reforming in the TORNADO-LE was measured. Co-efficient of energy transformation for the ethanol reforming in the TORNADO-LE was obtained. Also output gas composition was measured by gas-chromatography (H$_2$ - 28%, CO - 17,5%, N$_2$ - 55%, CO$_2$ - 4,5%).