## Reforming Energy Consumption Subsidies in Ukraine: A CGE Analysis

Topic: CGE and econometric input-output modeling III

Author: Maksym Chepeliev

In Ukraine energy subsidies are intensively used as a socio-economic policy measures. According to the IEA estimates in 2011 they amounted to 5,7% of GDP, since then their share is progressively growing, which is especially representative against declining world average rate of 0,88%.

While offsetting households' income differentiation, contributing social and political stability, such a wide use of energy subsidies distorts equilibrium prices, encourages overconsumption, reduces investment attractiveness, increases burden on the state budget, leads to the inefficient recourses' allocation and negative environmental effects. Furthermore, existing mechanism not only discriminates industrial consumers by means of cross-subsidization in electricity sector, but also benefits high-income households through preferential financial resources allocation, especially for steam and hot water supply.

In this study we use a recursive dynamic CGE model to investigate economy-wide effects of partial and full elimination of energy consumption subsidies. Special treatment in the model is given to households by dividing them into decile groups. Apart from disaggregated consumption, impact on sectoral production, investments, exports, imports and macroeconomic aggregates is analyzed. Furthermore, different options of compensating mechanisms that allow to reform tariff policy in a socially acceptable manner are considered. Results show that even in a short run subsidies' elimination has no severe impact on GDP due to rapid investment growth and gradual economic structural changes. At the same time residential sector suffers from regressive effects: poor households loose relatively more than rich. In his context progressive taxation as well as direct transfers prove to be efficient social dampers.