

## Appendix: Variable definitions

### A.1 Dependent variables

*Ln\_GDP*: the logarithm of regional gross domestic product.

*Ln\_PGDP*: the logarithm of regional gross domestic product per capita.

Average sales price: take the average of national sales electricity prices.

Sales price for the industrial user:

*Ln\_patent*: the natural log of the number of effective patent applications of IEADS.

*Ln\_MFI*: the natural log of the fixed asset investment in the manufacturing sector.

### A.2 Explanatory variables

*Electric* indicates whether to carry out transmission and distribution price reform for province *i* on year *t*. Taking into account the time lag of the policy, electricity price reform will generally play a role in the year after the reform, province *i* launched transmission and distribution price reform in  $Year_{t-1}$ , that is, *electric* = 1, otherwise = 0.

*L1\_electric* indicates that the transmission and distribution price reform is one year ahead of schedule.

*L2\_electric* indicates that the transmission and distribution price reform is two years ahead of schedule.

### A.3 Control variables

*FDI* is annual net flows of foreign direct investment (FDI; percentage of GDP).

*Edu* is number of students in regular colleges and universities divided by total population of the region.

*Save* is total savings for urban and rural residents divided by GDP.

*Invest* is regional fixed asset investment divided by GDP.

*Consume* is total retail sales of whole society goods divided by GDP.

*Exp* is the ratio of total exports to total imports.

*Sec* is the output value of the secondary industry divided by GDP.