

Analysis of Spatiotemporal Electricity Consumption Distribution in National Capital Territory of Delhi, India

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Framework

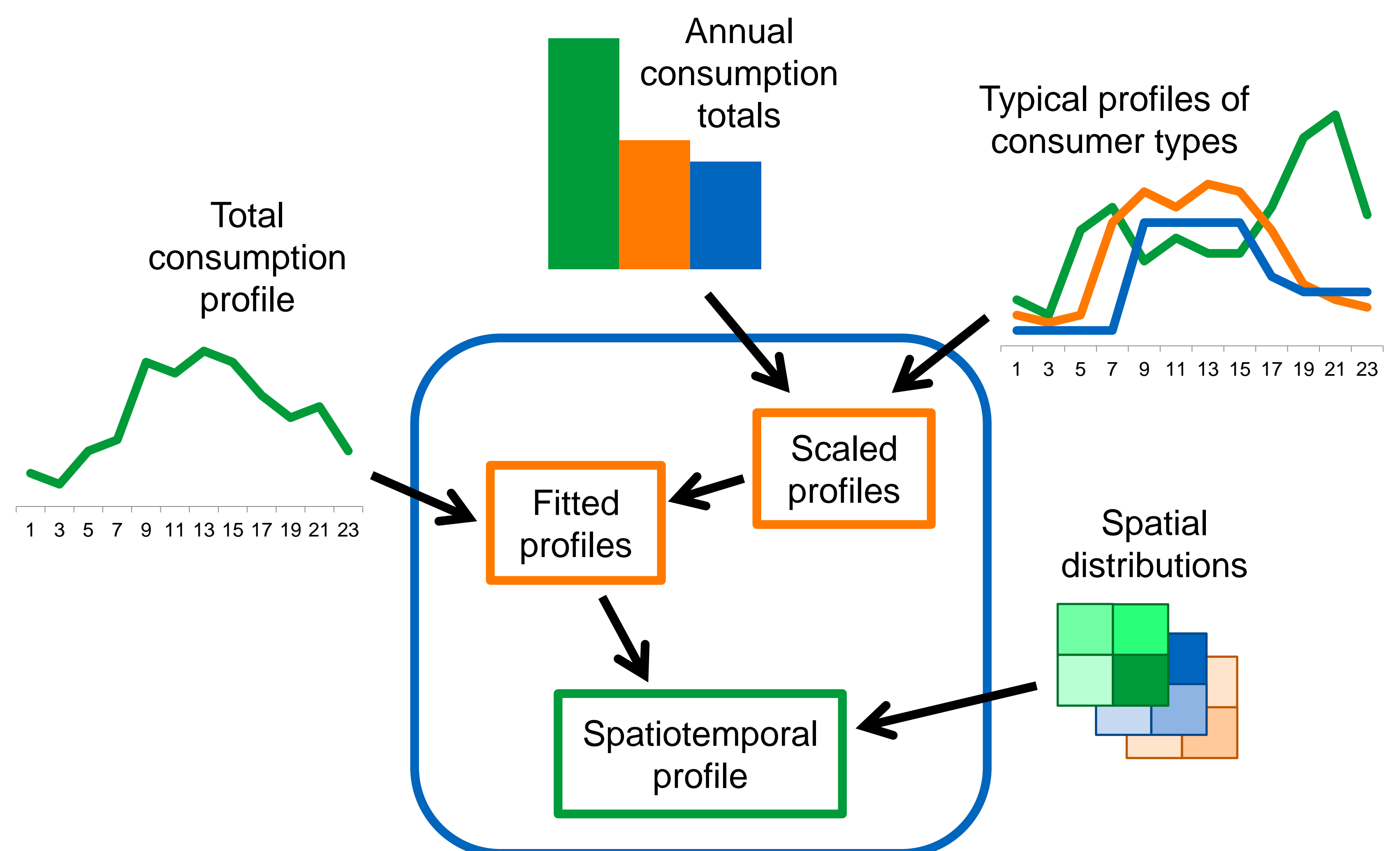
- Required: spatiotemporal data
- Needed for optimizing
 - Generation mix
 - Generation distribution
- Lack of data
 - Nonexistent
 - Not available

Area

- 17 million inhabitants
- 1500 km²
- 9 districts, 27 sub-districts
- 25 TWh annual electricity consumption
- Little data available

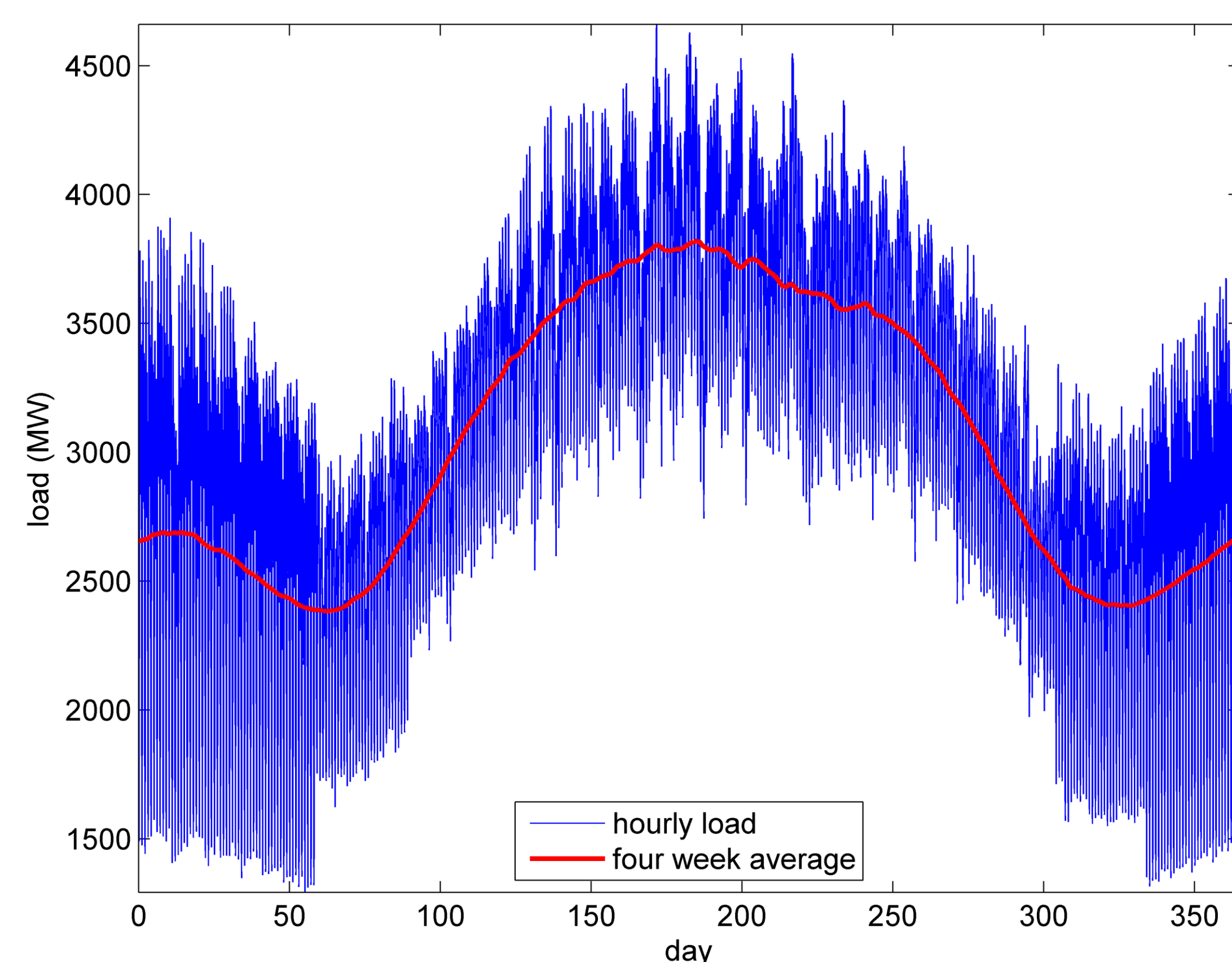
Used method

- Simple and effective principle
- Difficult to find or construct actual input data



Results

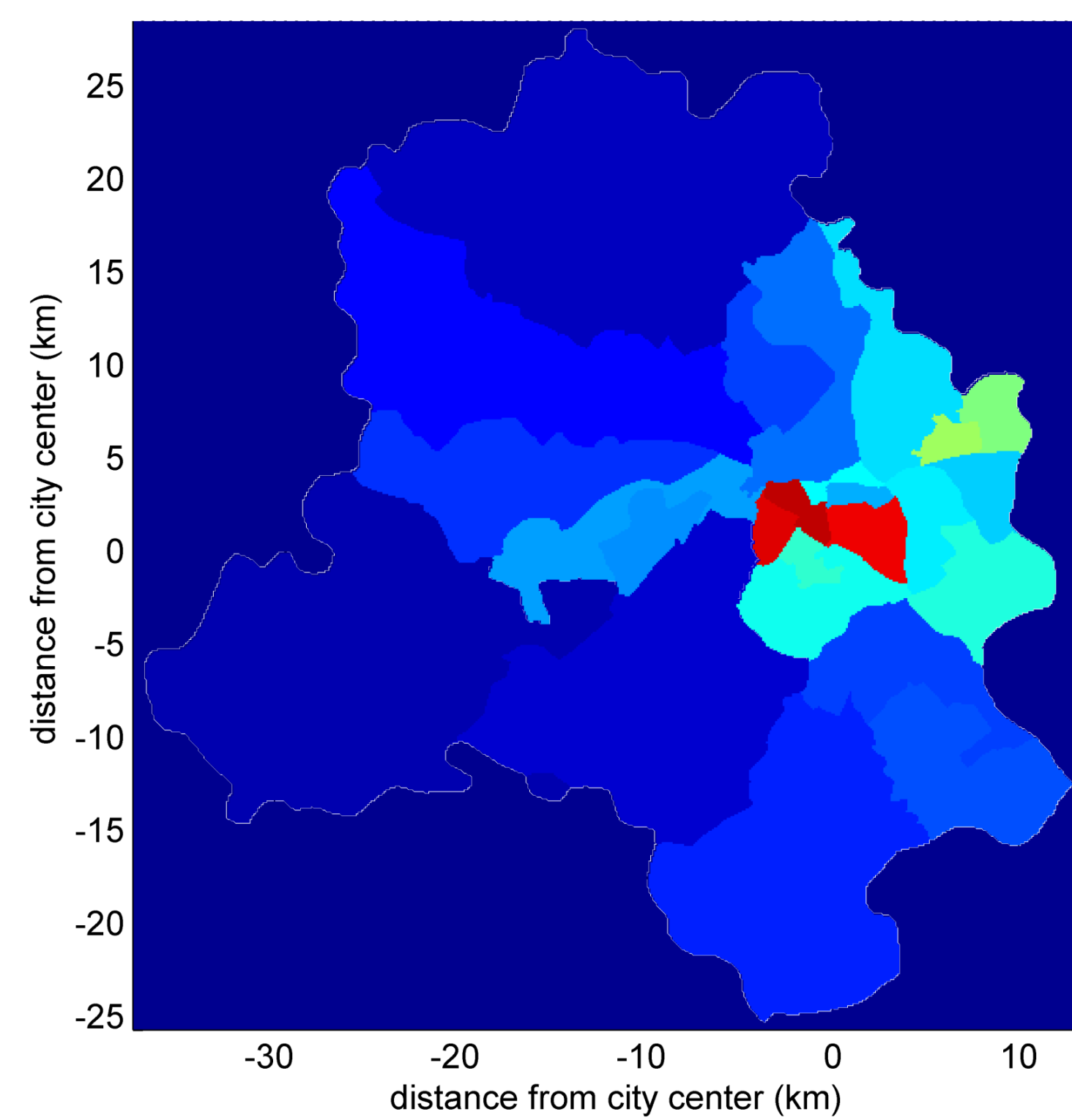
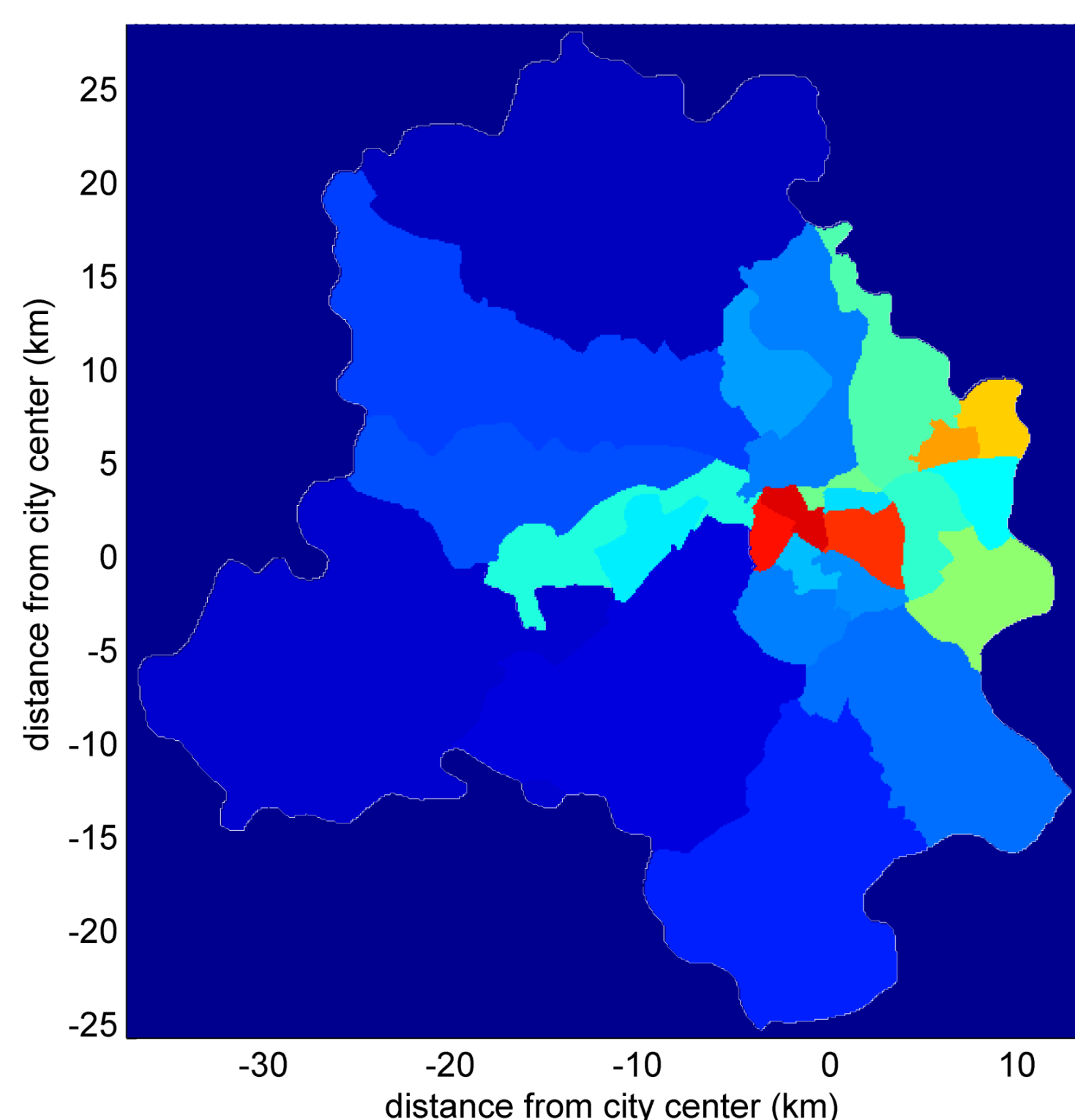
- Normal year hourly electricity load



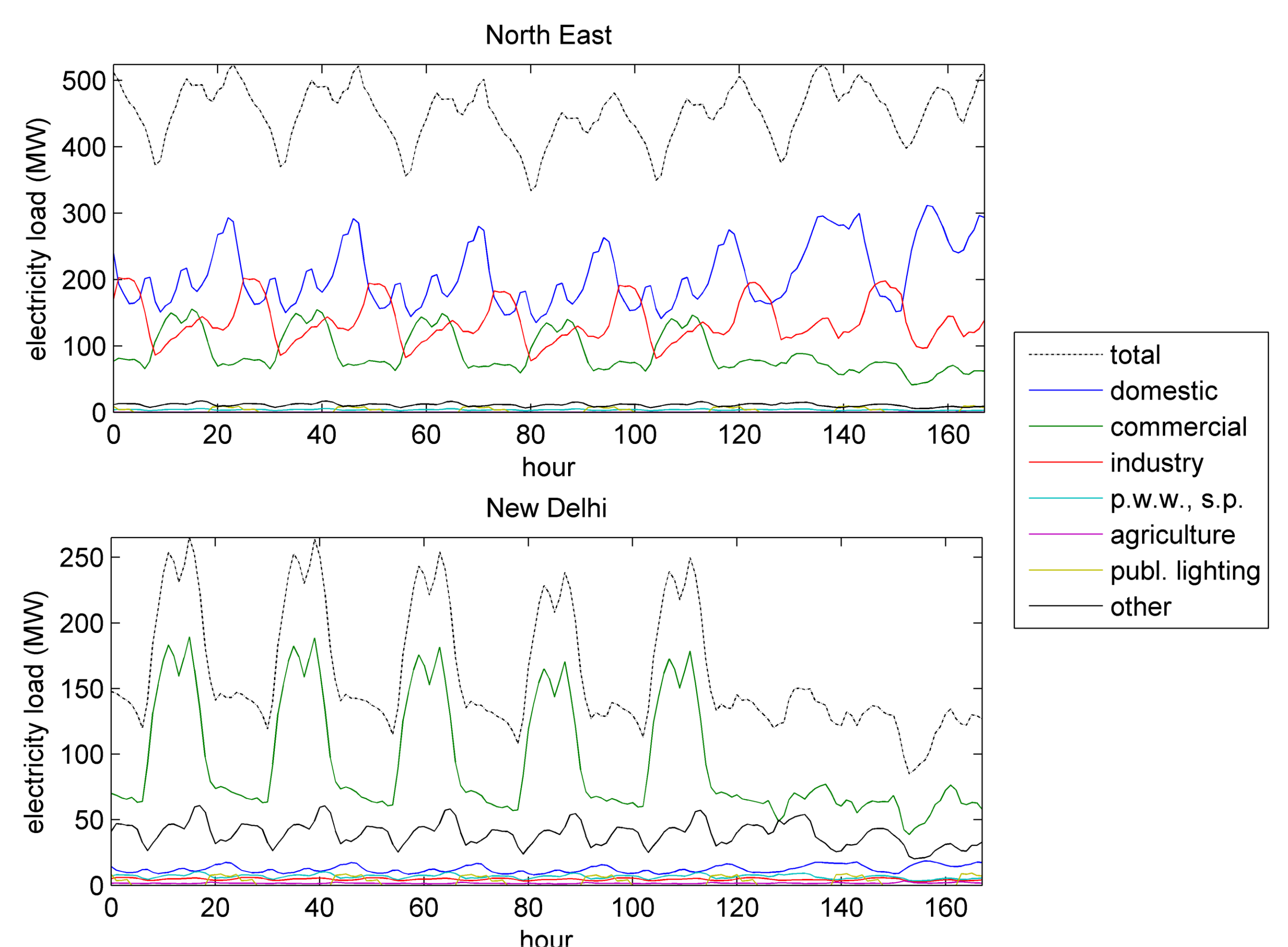
- Sub-district-wise electricity load densities

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Sun 23.6.2013 22:00



- Consumer class profiles (for each sub-district)



Conclusions

- Spatiotemporal profile achieved
- Highly customized pre-processing
 - Averaging assumptions
 - Limited applicability
- Interesting average day profile
- Slums?
- Poor spatial resolution
 - Land use data implementation?