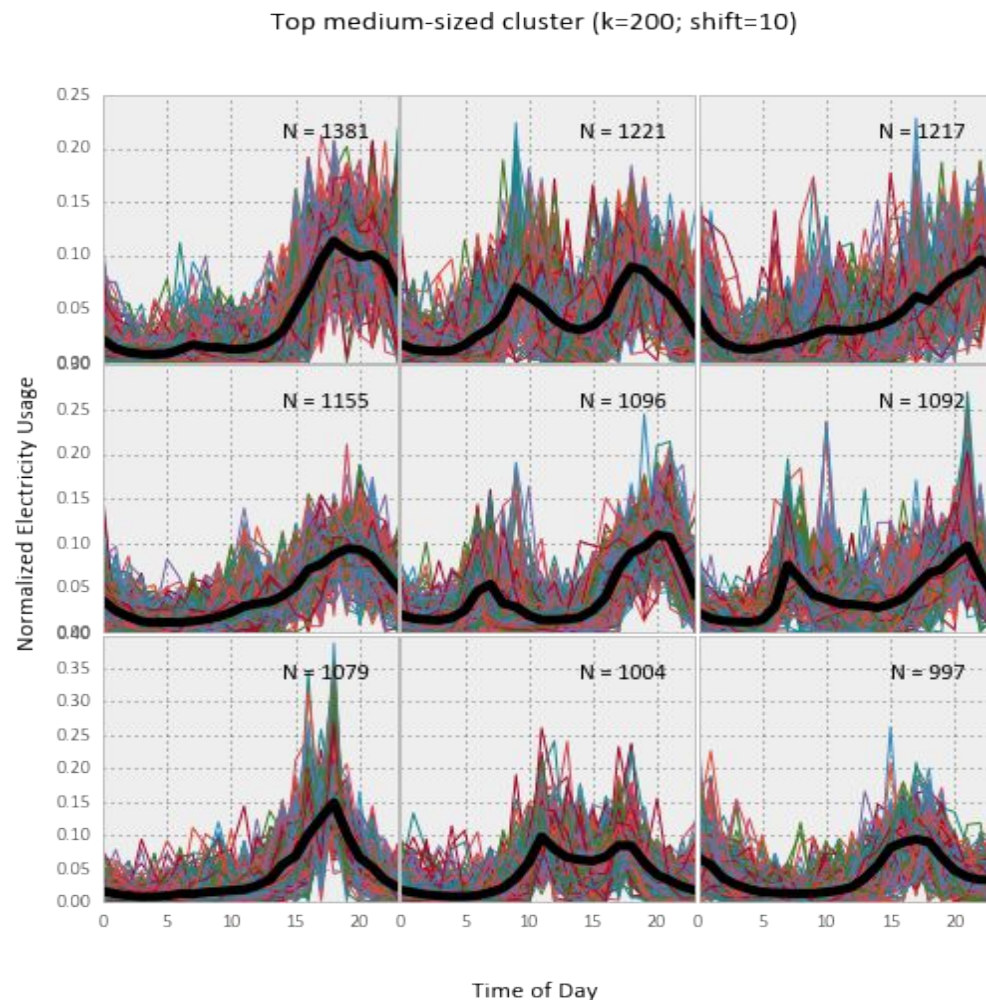# Load Profile Clustering Techniques for Residential Electricity Usage Data

DST Meeting 2016-08-04
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Data

- 100603 users, all-year, de-min, hourly electrical usage meter data
- Clustering representative load profiles (RLPs) for different pricing policies

Top medium-sized cluster (k=200; shift=10)

Progress

- Algorithm:
  - Centroid-based: KMeans, KMedoid, Adaptive KMeans
  - Hierarchical Clustering: Ward, Average,Complete; Euclidean, Chebyshev
  - Density-based Methods: DBSCAN, OPTICS
  - Probabilistic method: Gaussian Mixtures
- Comparison Metric:
  - Similarity Matrix ,Cluster Dispersion Indicator, Mean Index Adequacy, Silhouette, Davies-Bouldin Index, RSE Violation rate

Results