Joshua Rhodes (CAEE) : First Results and Future Research

- **Education**

- **Most recent publication: Energy audit analysis of residential air-conditioners***

- **Outreach**
  - **Explore UT, local elementary school volunteer**

- **Interests**
  - **Systems level analysis of the integration of smart grid technology and building physics**

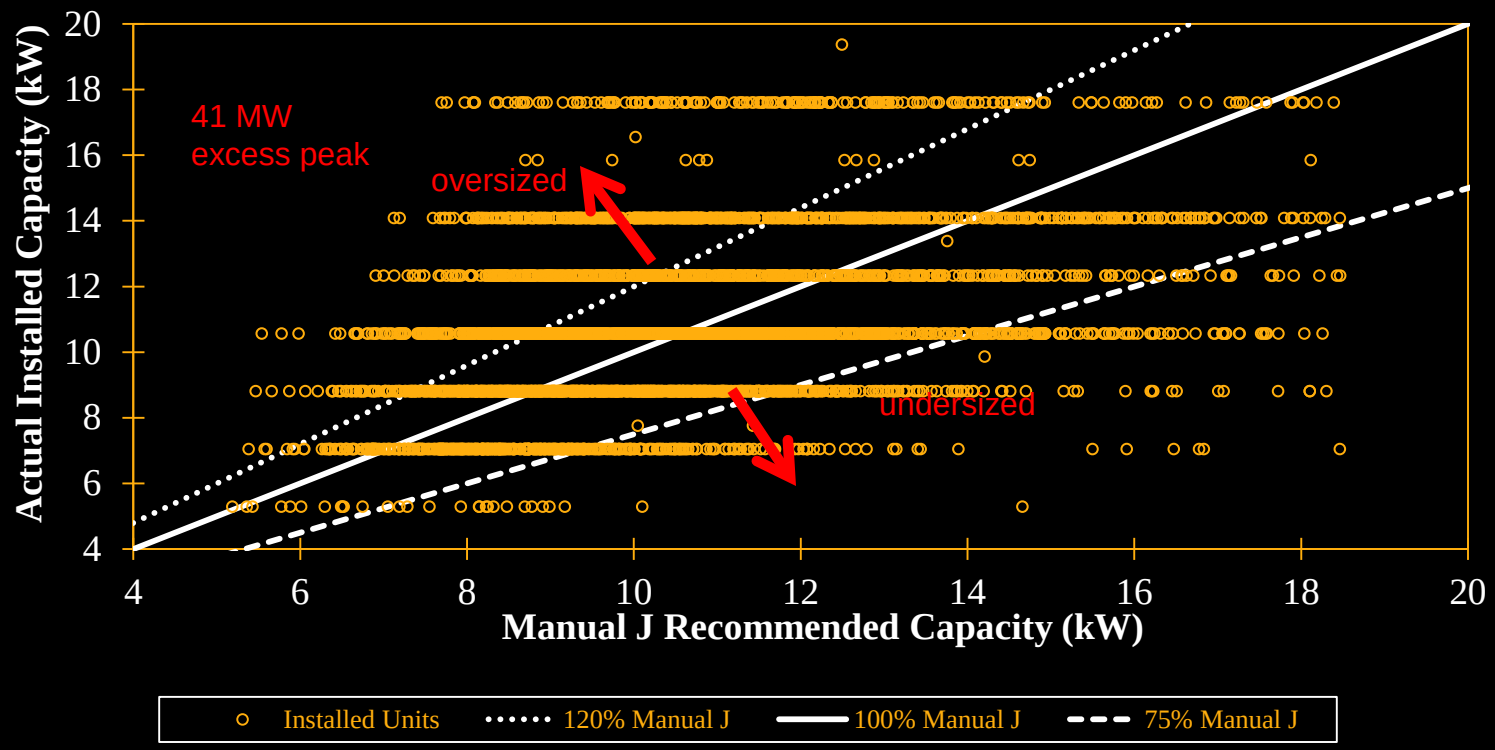
*J.D. Rhodes, et al., Using energy audits to investigate the impacts of common air-conditioning design and installation issues on peak power demand and energy consumption in Austin, Texas. *Energy and Buildings* (2011), doi:10.1016/j.enbuild.2011.08.032

First analysis results and future research

- **Results for excess peak power usage**
  - **Inefficient A/C units**
    - **Excess peak power demand of 205 MW (8%)**
  - **Oversized A/C units**
    - **Excess peak power demand of 41 MW**

- **Future system level analysis**
  - **Total system energy balances**
    - **Technology performance**
    - **Environmental tradeoffs**
  - **Pricing plans & consumer behaviors**

First results: many air-conditioners are oversized



- **Thanks**
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