

## DOCKETED

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## **Possible research areas**

Possible HVAC research areas could include topics outlined below. I think it is important to fund projects at various scales, for example, large multi-entity awards, as well as small grants for proof-of-concept of ideas (like previous EISG program).

### **IOT and HVAC**

- Needed: Technology development, demonstration. Consideration of the human interface.
- Related: AB-1103 and AB-802. Building benchmarking. Increased monitoring of systems with low costs sensors and access to real-time data could create “virtual meters” and help building owners achieve benchmarking targets.
- Also related to building benchmarking: Audit tools to identify retrofit opportunities

### **Compressor-less cooling**

- Indirect evaporative and evaporative chiller technology has come a long way
- Need to be able to properly value water

### **System efficiency**

- Consider total system efficiencies (equipment + distribution) instead of separating equipment efficiency and distribution efficiency. For example, refrigerant system + air handler + ducts.

### **HVAC Duck-Curve**

- Evaluate options for storage to address duck-curve that is greatly affected by HVAC Equipment. Thermal energy storage and electrical energy storage.

### **Indoor agriculture**

- Managing HVAC energy consumption related to cooling and dehumidification