The challenge

Hawaii’s cooling tradewinds are faltering, ocean temperatures are rising. As climate change makes the Islands hotter, focus once again turns to quickly cooling our aging classrooms. As funding is released by the state, we will continue to whittle away our lengthy project list. Our goal is to make all classrooms comfortable, sustainably, using fact-based, data-driven methodologies that lead to effective long-term solutions. We will continue to work with the Legislature and community on this pressing issue.

New schools are built to modern standards, with technologies that ensure energy efficiency and stability. For the majority of our schools, however, the following are realities to keep in mind.

OLD BUILDINGS, INFRASTRUCTURE

The majority of HIDOE schools are on average more than 50 years old. Their electrical systems reflect a bygone era. They weren’t designed to support today’s high level of energy demand — for computers and broadband networks, let alone air conditioning (AC). Many older classrooms have only four electrical outlets, for example. Schools that installed AC units without the proper electrical support have blown circuits to classrooms, even building wings. Also, most of our buildings are not designed to be air-tight. For an AC system to cool a room, the building envelope needs to be sealed, requiring replacement of windows and doors, among other things.

BUDGET CONSIDERATIONS

HIDOE spends about $48 million annually on electricity. That will rise as more AC is installed. After Pohakea Elementary’s AC went live, its power bill doubled. There are also ongoing maintenance costs with these systems.

HEAT ABATEMENT OPTIONS

MECHANICAL COOLING

- Air conditioning, including photovoltaic AC
- Ceiling fans
- Nighttime heat flushing fans
- Solar light

PASSIVE COOLING

- Trees to reduce sunlight on buildings
- Heat reflective paint
- Awnings/coverings to cut direct sunlight
- Trellises, covered walkways and plant-covered walls

CAN I DONATE AC?

Yes, anyone can donate AC units provided they meet health and safety requirements and are a match for the electrical system at the school. Learn more: bit.ly/HIDOE-ACdonate.

If you have additional questions, please contact HIDOE’s Auxiliary Services Branch at 586-3452.

Learn about the Heat Abatement program: bit.ly/heatabatement