DOCKETED	
Docket Number:	21-IEPR-06
Project Title:	Building Decarbonization and Energy Efficiency
TN #:	239961
Document Title:	Presentation - SCALING UP BUILDING FLEXIBILITY THROUGH ENERGY SAVINGS PERFORMANCE CONTRACTS
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Submitter Role:	Public
Submission Date:	10/4/2021 1:25:07 PM
Docketed Date:	10/4/2021

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SCALING UP BUILDING FLEXIBILITY THROUGH ENERGY SAVINGS PERFORMANCE CONTRACTS

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GSA GREEN BUILDING ADVISORY COMMITTEE FINDINGS

1. Demand reductions can generally be included in ESPC/UESC projects and counted towards energy savings goals
2. Cost savings due to adoption of time-of-use and real-time pricing can be included in savings guarantees and business cases but are subject to change over time
3. Guaranteed energy demand reduction savings estimates are usually factored (50% is typical) to be conservative

KEY GSA GEBS TASK GROUP FINDINGS

4. The expertise required to identify and quantify demand reduction measures is specialized and not widely distributed through ESCOs and energy offices
5. The energy demand reduction savings are generally only guaranteed and included in the business case for a few years because tariffs and demand response programs can change
6. Savings are tracked and reported for the entire contract period although not guaranteed

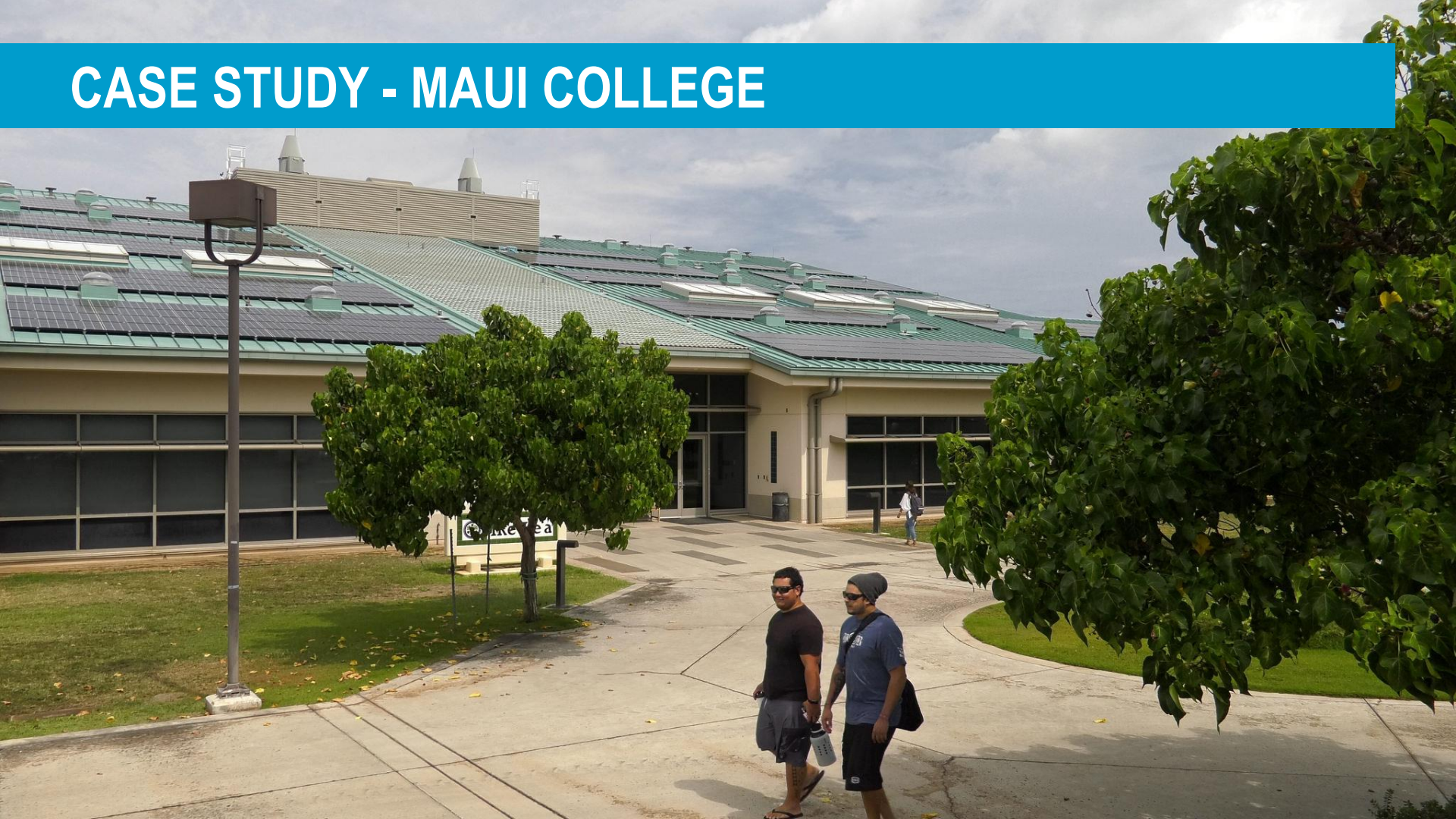
KEY GSA GEBS TASK GROUP FINDINGS

7. Demand response programs that provide a fixed monthly payment for a commitment to shed a given load (capacity programs) are the easiest to incorporate into an ESPC
8. Hourly solar PV generation and usage data is helpful in estimating time-based demand reduction capability and risk
9. Energy demand reduction from energy storage (thermal and electric) and combined heat and power (CHP) are often included in ESPC business cases

GSA GEBS TASK GROUP RECOMMENDATIONS

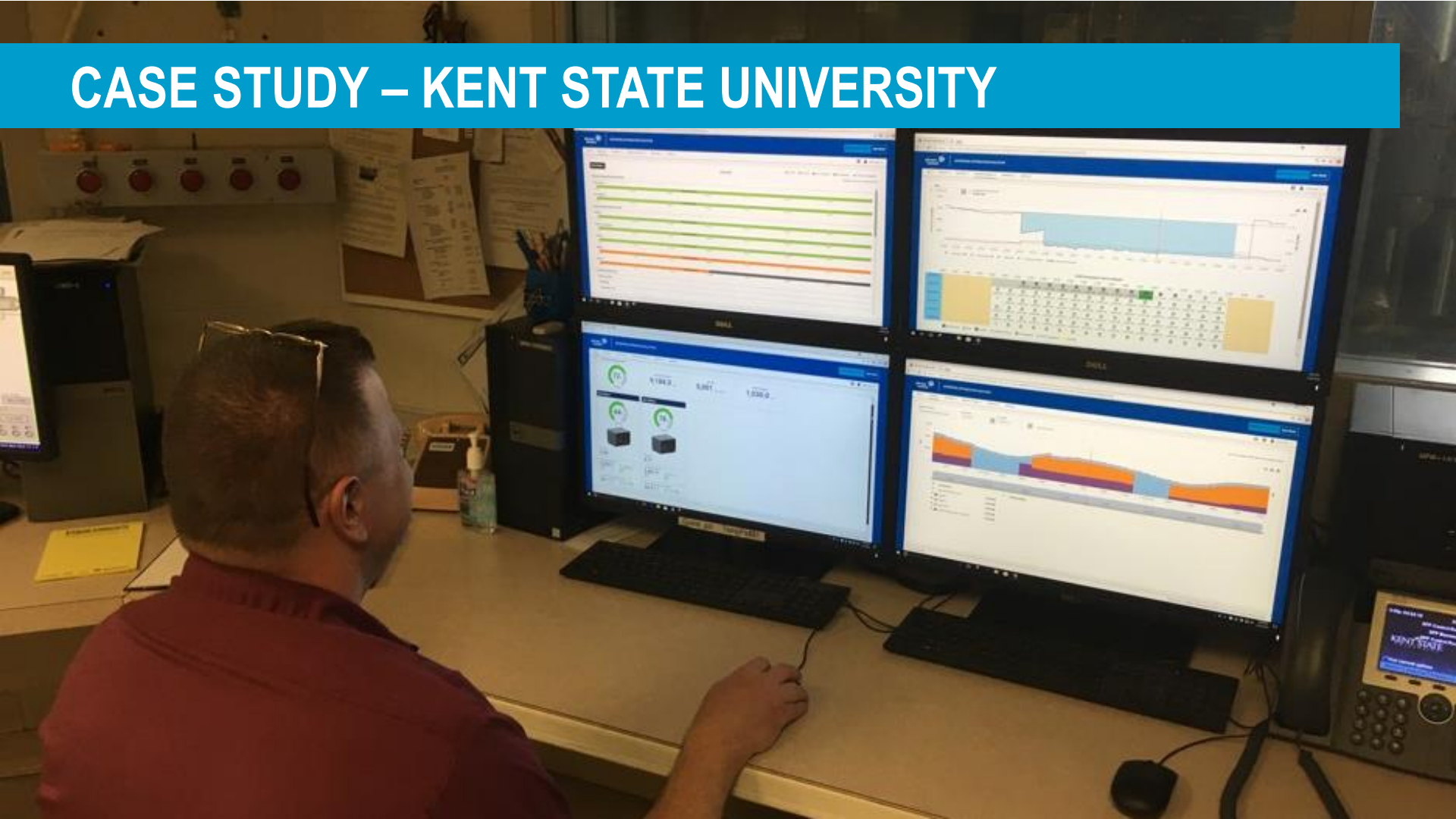
- ESPC projects measure and verify energy savings while stipulating the energy price with an annual escalation factor - Adopting a similar approach for demand reductions would reduce risk and increase infrastructure investment
- Consider special tariffs for ESPC projects that are fixed over a longer period or time or have a maximum change over time so that demand savings can be factored appropriately

CASE STUDY - MAUI COLLEGE



CASE STUDY – GEORGIA INSTITUTE OF TECHNOLOGY

CASE STUDY – KENT STATE UNIVERSITY



ESPC DEMAND FLEXIBILITY ISSUES IN CALIFORNIA

- Permitting for ESPC/PPA projects with distributed energy resources, energy storage and microgrids
- Building controls and behind-the-meter DER integration with the electrical grid and energy providers
- Frequent changes in demand response programs and solar net metering policies