CPUC Workshop Order Instituting Rulemaking (OIR) on Microgrids (R. 19-09-009)

12/12/2019

Agenda

- Why at Schools and Community Centers?
- Barriers to Rapid Deployment
- Suggested Solutions
- Q&A

- Emily Douglas
- Doug Ledbetter
- Neal Bartek

About ENGIE

ENGIE is the largest independent power producer in the world.

In California, ENGIE is a leading provider of energy services (solar, energy efficiency, energy storage) to schools and other public agencies.

Why Make Schools and Community Centers Resilient?

School Sites

- Benefits to School
  - Preserve Teaching Time
  - Increase Student Safety
  - Prevent Food Loss
  - Maintain Campus Security
  - Maintain IT Operations
- Benefits to Community
  - Dispersed, Trusted Locations
  - Support Working Parents
  - Can Target by Income

Community Centers

- Benefits to Community
  - Cooling/Warming Centers
  - Emergency Response Centers
  - Public Health & Safety
  - Locations in Neighborhoods
  - Footprint to Accommodate Solar Generation
  - Existing Facilities for Gathering

Student Impact

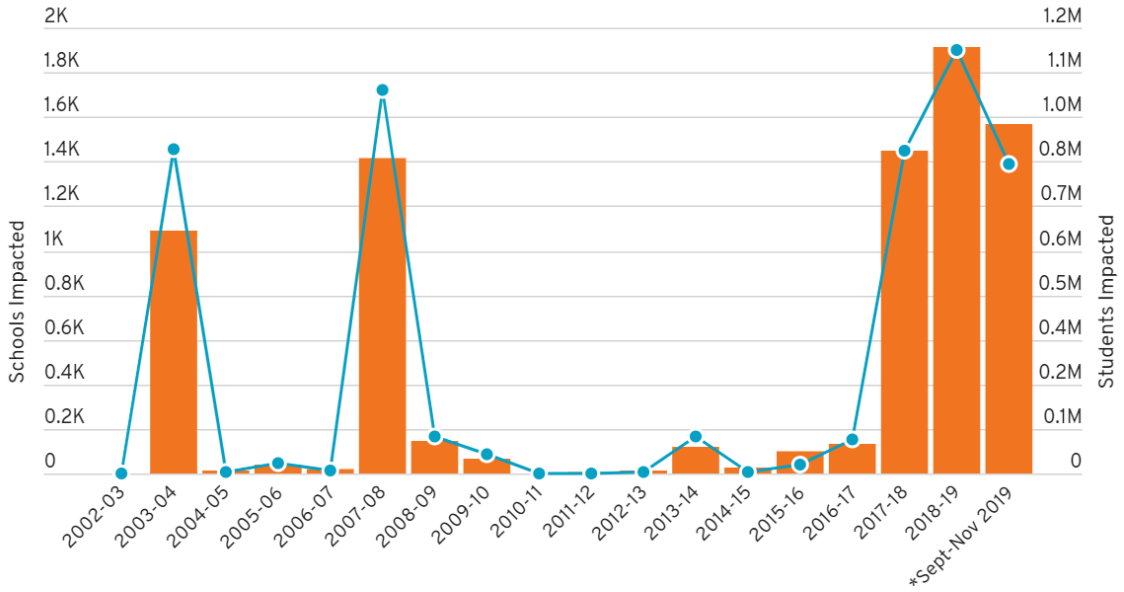
"Last school year,…wildfires and related outages and smoke pollution sent home more than 1.1 million of the state's 6 million or so public-school students"

"Missed school correlates strongly with lower academic performance, according to a host of academic research."

College and career readiness dropped in one fire-affected district from **50% to 27.5%.**

-*CalMatters via KQED*

(Dec 7th 2019, by Richard Cano)

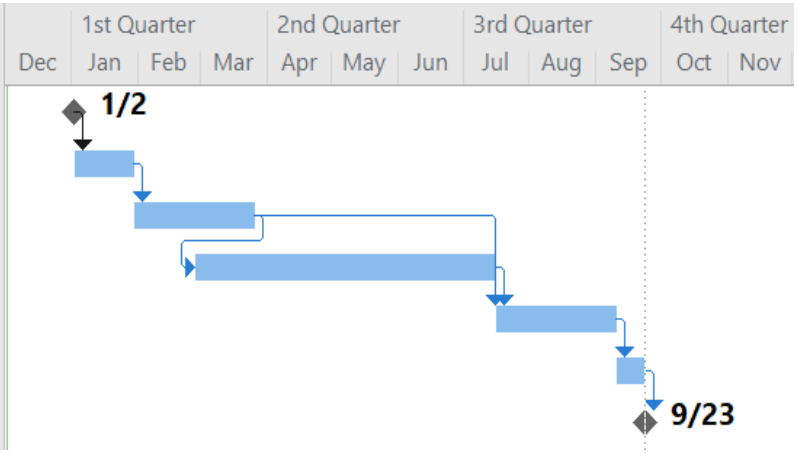


Barriers to Rapid Deployment

"Things the CPUC can't control…"

- Public Contracting Code
  - Paid-Thru-Savings *
- Lead Time for Manufactured Equipment
- Local Jurisdiction and DSA (Division of State Architect) Permitting
- Understanding Critical Loads and Sites
  - "Critical Load Panel"
  - Community Input on Priority Sites
  - Automated or Manual Load Shedding
- Space Constraints for Generation
- Cost of Islanding Capability

Task Name	Duration	Start	Finish
Start	0 days	Thu 1/2/20	Thu 1/2/20
Contracting	20 days	Thu 1/2/20	Wed 1/29/20
Design	40 days	Thu 1/30/20	Wed 3/25/20
Procurement	100 days	Thu 2/27/20	Wed 7/15/20
Installation	40 days	Thu 7/16/20	Wed 9/9/20
Commissioning	10 days	Thu 9/10/20	Wed 9/23/20
Finish	0 days	Wed 9/23/20	Wed 9/23/20



Potential Solutions to Rapid Deployment

"Things the CPUC can control…"

- Cost to Interconnect
  - Existing Rule 21 treats all loads as additive, without credit for offsetting storage, curtailment, controls or on-site loads
- How to quantify, capture the absence of loss…
  - Grant funding for temporary/rapid deployment of reduced-fuel solutions
  - Grant funding for longer-term, clean microgrid deployments
  - Incentive funding for fire and PSPS zones-
    - make sure schools are specially called out as critical facilities in need of clean back up power for islanding in SB 700 and SB 1339

Potential Solutions to Rapid Deployment

"Things the CPUC can control…"

Cost to Interconnect

- Allow Rule 21 to credit offsetting storage, curtailment, controls or on-site loads, instead of treating all loads as additive
- Allowing for backflow constraints instead of requiring costly grid upgrades
- Make CYME* information available to support site selection and design, explain costs imposed and inform Pre-Application Report
- Cover microgrids under normal grid operations instead of "Special Facilities"

Timeline to Interconnect

- Dedicated technical resources from IOU technical review for critical facilities, community facilities and schools
- Streamline levels of Grid Impact Studies for projects such as schools

Value of Resiliency

- How to quantify, capture the absence of loss…
- Cost of typical solar + storage solution today compared to cost of clean back-up solution that can island
- Grant funding for temporary/rapid deployment of reduced-fuel solutions
- Grant funding for longer-term, clean microgrid deployments
- Incentive funding for fire and PSPS zones-
  - Make sure schools are a focus in SB 700 and SB 1339 proceedings

Thank You

For follow up questions please reach out to walker.wright@engie.com