

EXPERTISE TO
ENABLE GRID
TRANSFORMATION

GridLAB



Oakland Clean Energy Initiative: A Case Study

Can we do
this better?

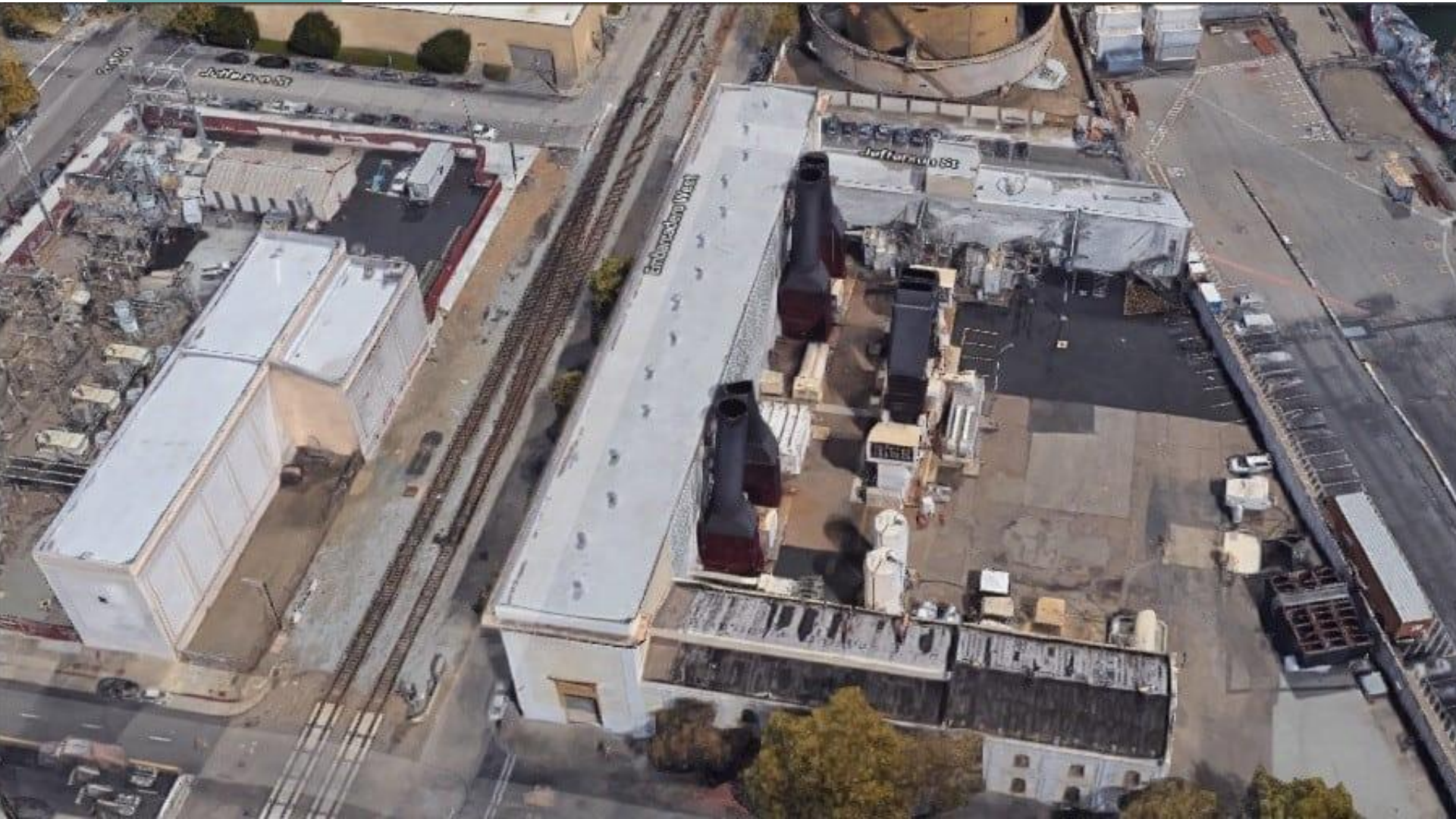


- Introduction to OCEI
- Structure & Revenue model
- Lessons Learned

The Challenge



- Aging 1970's jet fueled power plant in downtown Oakland, California, owned by Dynegy/Vistra, 165 MW, three units, 33,000 heat rate
- Plant is critical for grid reliability under transmission planning criteria (N-1-1) by CAISO (grid operator). Plant has a reliability must run contract (RMR).
- Plant runs a handful of hours per year, but is polluting, and impacts low income communities and communities of color.
- CAISO and PG&E (Transmission and distribution owner) need a reliability solution
- East Bay Community Energy (EBCE), the local Community Choice Aggregator (load serving entity), needs local resource adequacy.



Potential Solutions?



- ✓ Gas generation not compatible with state goals, local air permits.
- ✓ 230kV transmission upgrade costly
- ✓ *In 2018, PG&E and EBCE issue a joint all source RFO, seeking solutions, including:*
 - ✓ *Batteries*
 - ✓ *Demand Side options*

Solution =
Storage!



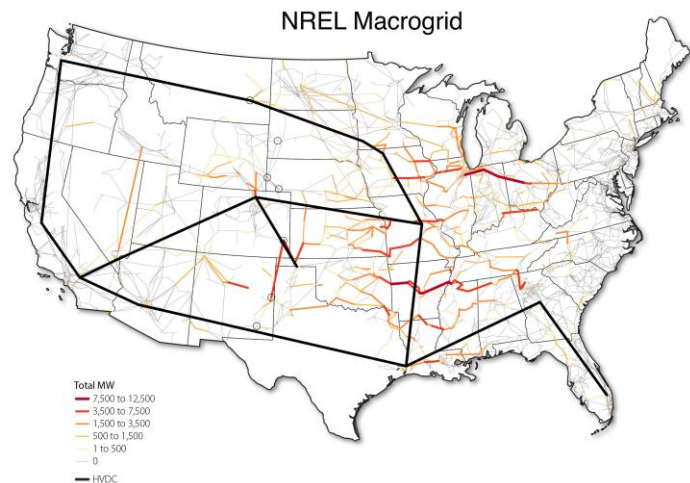
- 2019: PG&E Executed contract with Vistra for a **20 MW/80 MWh** energy storage system, product is “reliability” e.g. contingency relief.
- 2019: EBCE executes contract with Vistra for resource adequacy.
- Project is front-of-meter, distribution interconnected, adjacent to PG&E substation.
- 2020: Vistra Contracts with PG&E and EBCE increases to **36.25 MW / 145 MWh**.
- 2020: New contract with esVolta/Tierra Robles for **7 MW/28 MWh**.
- **January 2022** - Expected online date
- *Demand side options not selected*

Structure and Business Model



- **PG&E – Transmission Owner**
 - Battery serves as a Non-Wires solution, replacing a required transmission upgrade to meet an N-1-1 requirement
 - Battery at 100% State of Charge from 0600 to 2000, maximum 50 cycles per year
- **EBCE – Load Serving Entity**
 - Battery serves as resource adequacy, e.g. generation capacity
 - In CA, 4-hour battery has 100% ELCC (capacity credit)
- **Vistra – Asset owner**

How can we replicate OCEI?



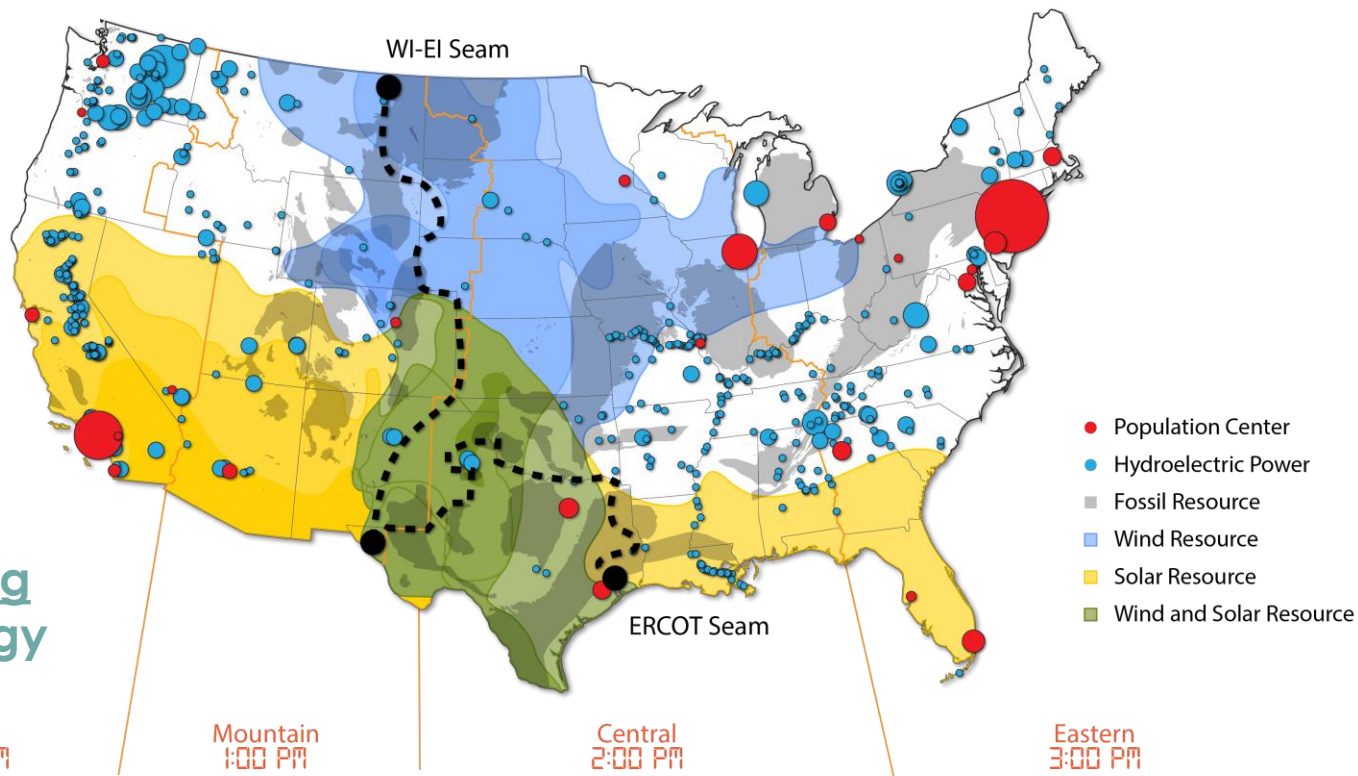
Does it have to be this hard?

Do our planning processes allow for these sorts of projects?

Is storage considered as a solution for transmission issues (contingency, voltage, others)

Can we structure dual-use contracting to unlock storage potential?

THANK YOU



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