CAPSTF Analysis, Status Update

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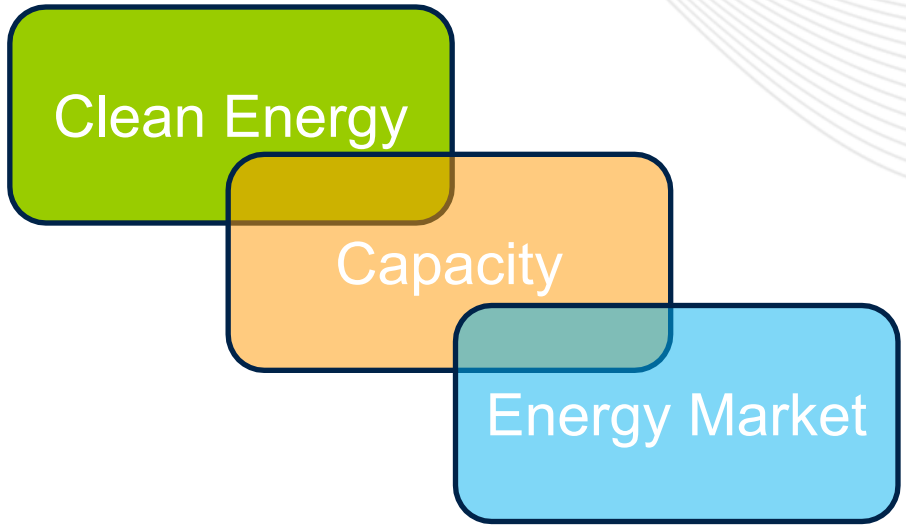
Modeling

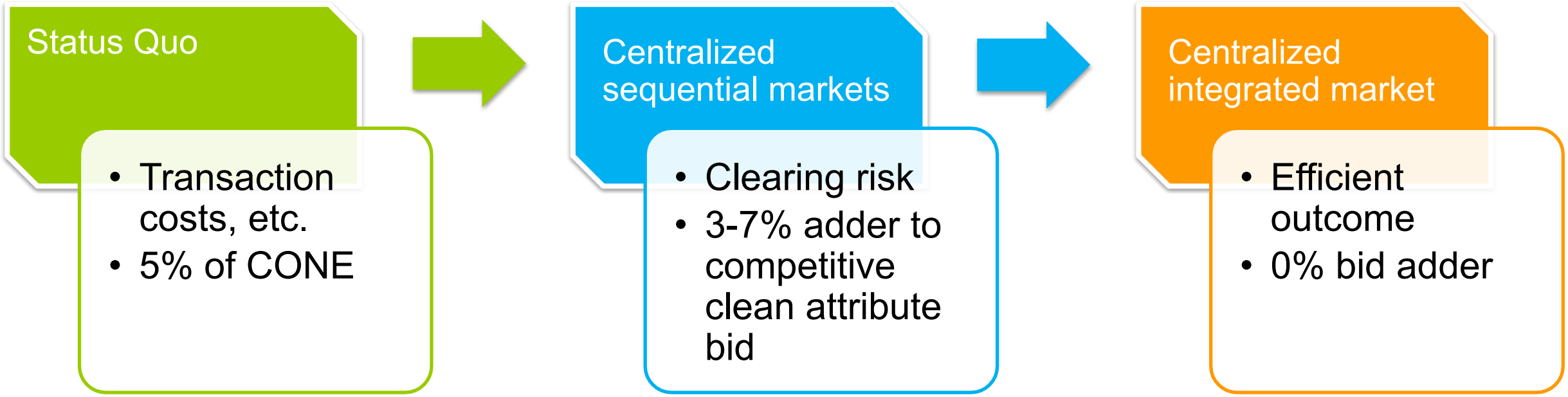


- Problem formulation & code for forward markets
- Model markets for clean energy, capacity, energy
- ELCC changes over time

- Linear Model
- Geographic differences for fuel costs and CFs
- EE Eastern Interconnect data

Frictions associated with clean energy procurement

Least Efficient ⟶ **Most Efficient**



Friction, quantitative example

- Solar project: ELCC=50%, CF=21%, CONE=$400/MW-ICAP-day
  - Capacity payment $20 (0.5 x $40/MW-UCAP-day capacity price)
  - EAS $250 (5 MWh production x $50/MWh energy price)
- **Need another $130/MW-ICAP-day to cover costs**
  - Competitive REC offer is $130/5 RECs = $26

Frictions, quantitative example

Status Quo

- 5% of CONE $400/MW-ICAP-day
- The additional project cost is $20/MW-ICAP-day
- The REC price is 26 + 20 / 24 / 0.21 = $30/MWh

Centralized sequential markets

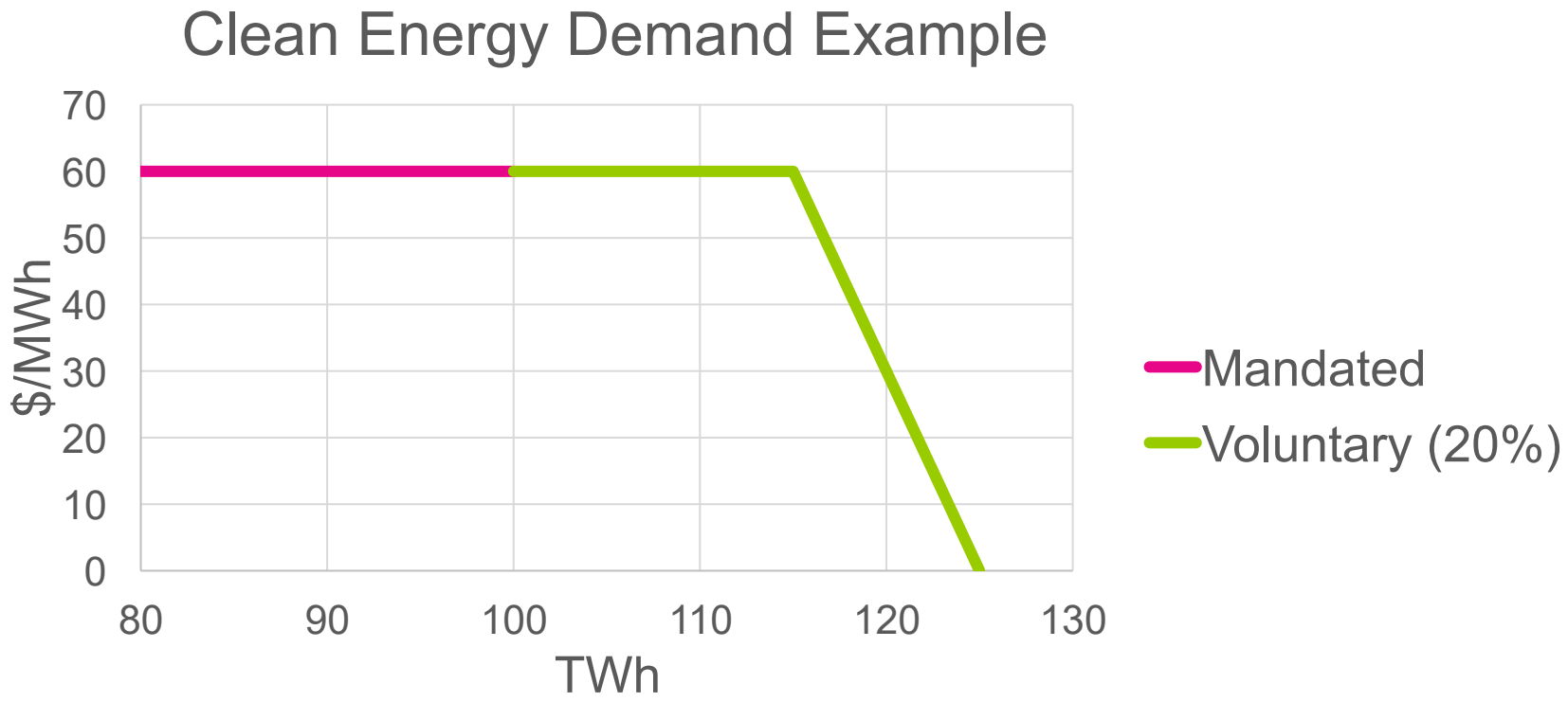
- 5% added to REC price of $26
- The bid is 26 + 0.05 x 26 = $27.3/MWh
- Additional project cost 0.05 x 26 x 24 x 0.21 = $6.5/MW-ICAP-day

Centralized integrated market

- 0% added to REC price
- The Bid is $26/MWh

Clean energy demand for cases with voluntary participation

- RPS target: vertical demand at 100TWh
- Voluntary demand: 10%, 20%, 30% of RPS target with ±5% slope



Next steps

- Continue working on simulation model and data
- Target to share initial results by end-of-year

Contact

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