

ISSUES AND CONTROVERSIES IN CLEAN ENERGY

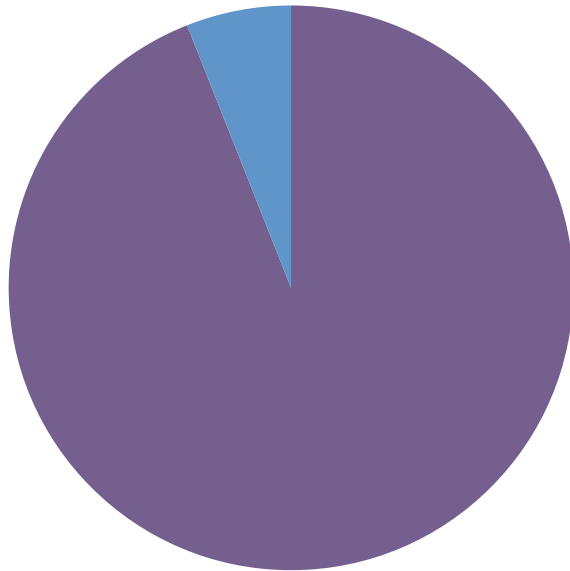
**Answering the Energy Mix Question
& Challenges in Implementing
the “Right Energy Mix”:
The Resources and Technologies**

Brad Rockwell

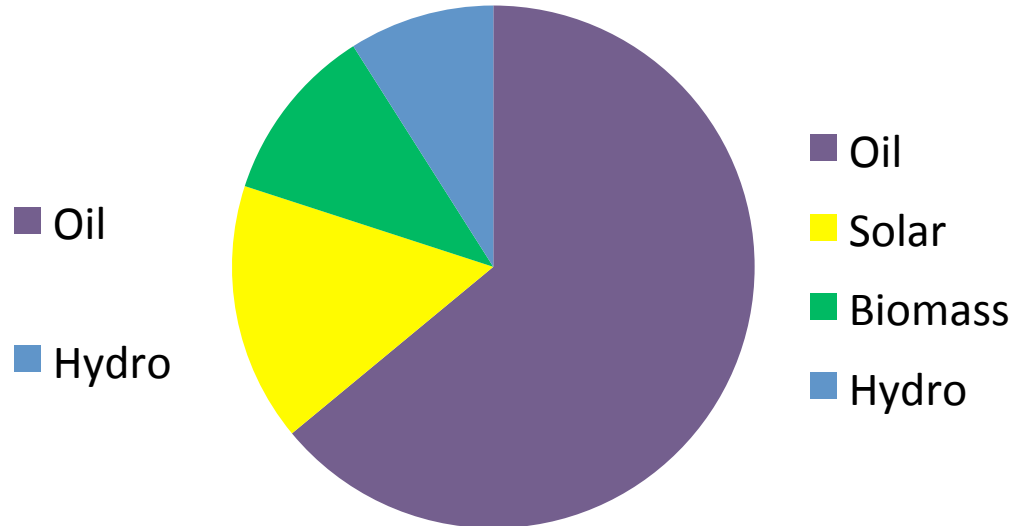
Power Supply Manager, Kaua‘i Island Utility Cooperative

Phase I: The 'easy' part

Fuel mix 2005

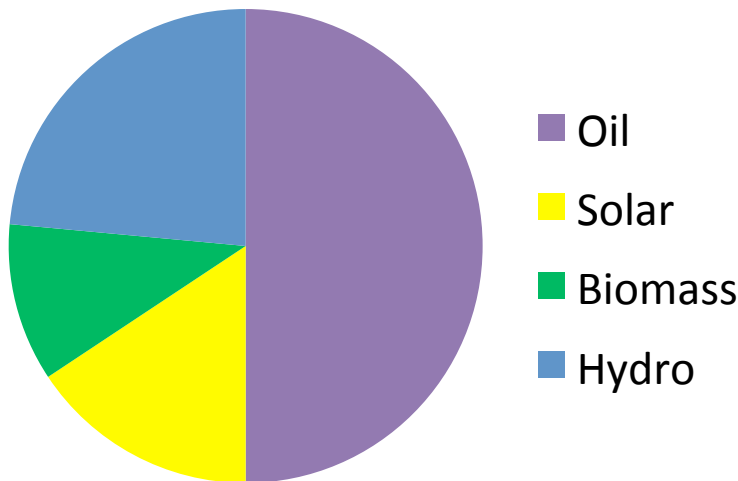


Fuel mix 2015



Phase II: Get a higher ladder

2023 fuel mix goal



Hydro most viable next step

- Proven technology
- Abundant resource
- “Semi-firm”
- Cheap power for 100+ years

But ...

- Lengthy, complex permitting
- Community resistance
- Huge capital costs, clock ticking on low interest rates

Phase III: That other 50%

- Replacement of conventional units
- New fuel sources (LNG, biodiesel)
- Should we keep going with renewables?
(Battery storage, pumped storage, etc.)