

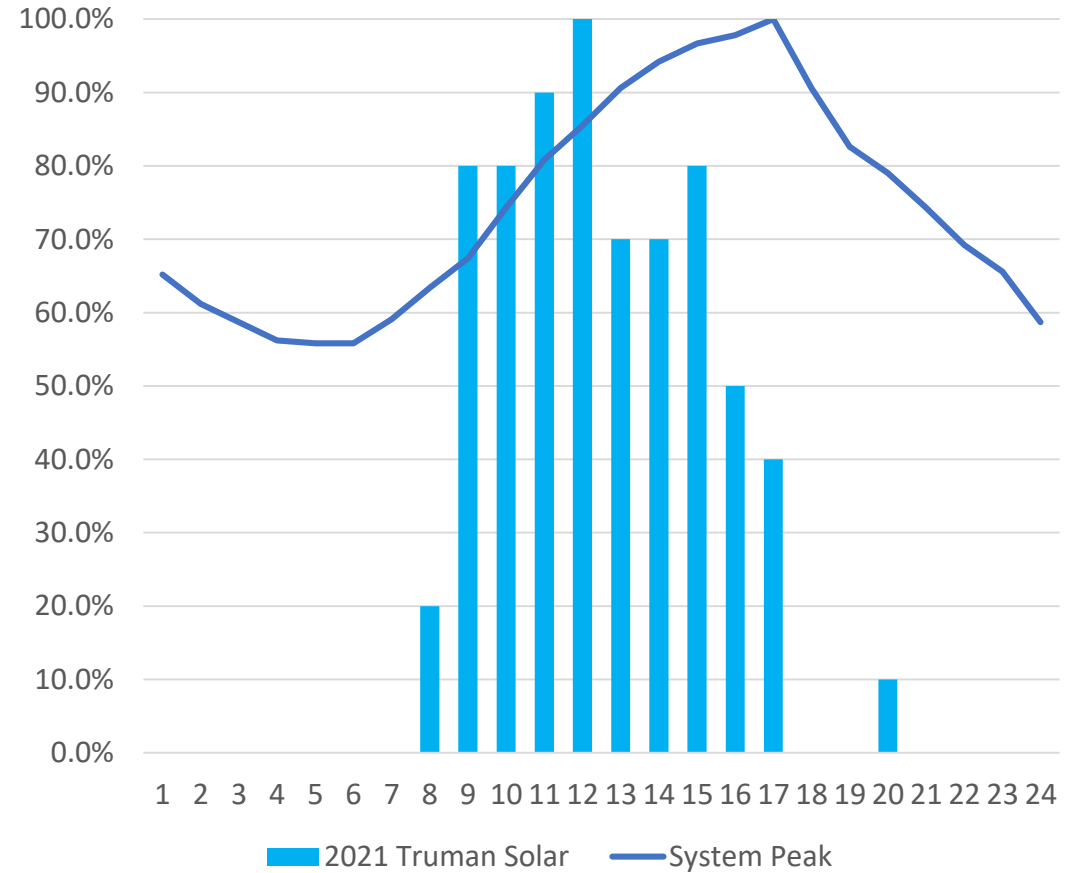
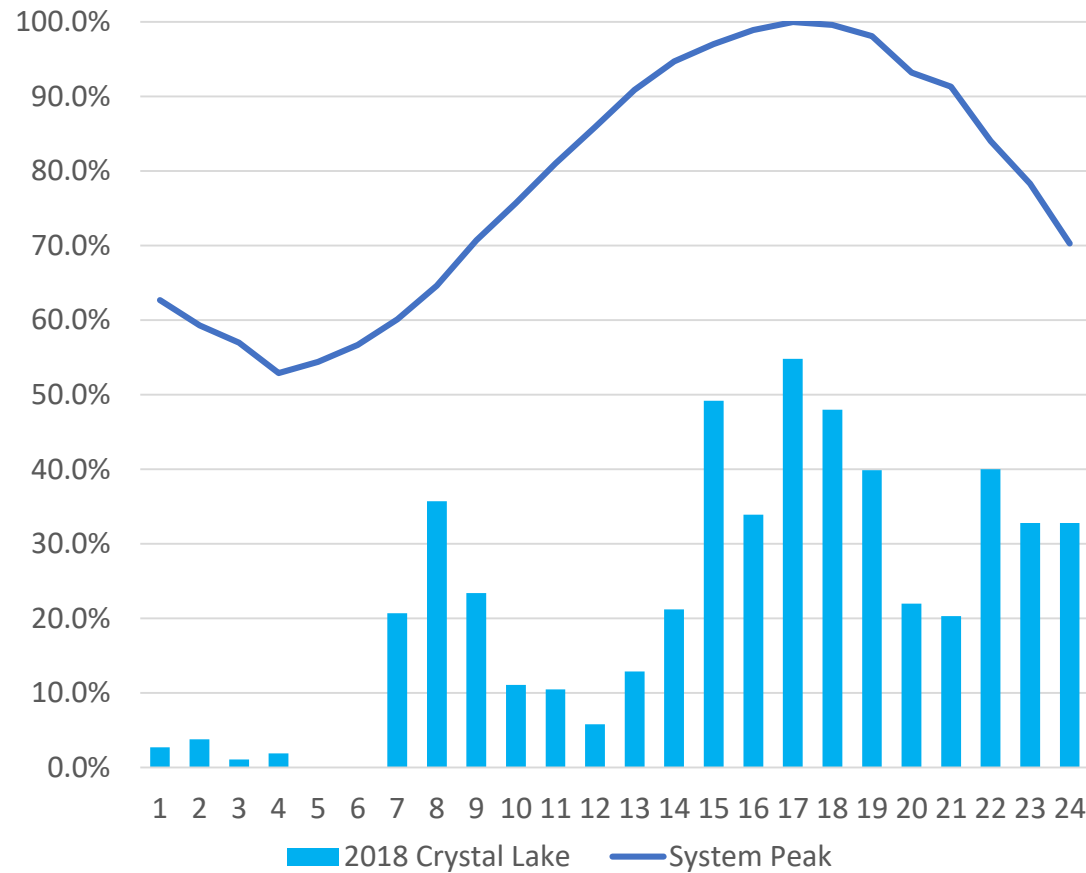
What Does
100%
Renewable
Energy by
2030 Mean?





**All electricity
provided by the
utility comes
from renewable
energy sources**

Wind and Solar are Intermittent Resources



What About Batteries?

- FPL (Florida Power & Light) Built the Manatee Energy Storage Center, a 409-MW/900-MWh battery storage facility
- Discharged at Full Capacity – No Power After 2 Hours and 12 Minutes
 - $900/409 = 2.2$ or 2 hours and 12 minutes

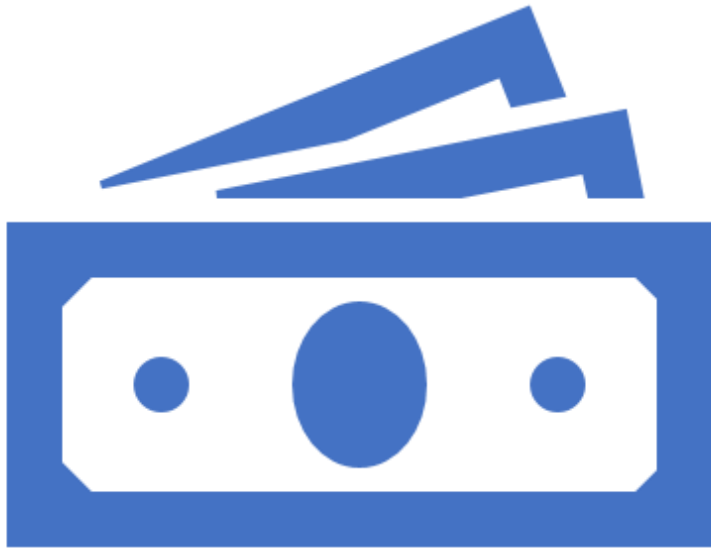


Pretend

An equivalent amount of energy is purchased from intermittent renewable energy sources and existing sources continue to provide power



Proposal Is Fiscally Irresponsible



- 2022 System MWH's – 1,263,615
- 2022 Renewable MWH's – 229,371
 - 2022 Renewable 3% Cost Cap – \$3,978,176
 - 2022 Additional Renewable Cost – \$6,303,276
 - 60% Above Cap
- Grain Belt Contract – Anticipate 150,000 MWH's
 - City Discussing Additional 80,000 MWH – Will Meet 30% Level
- Contracts Required for 100% – About 800,000 MWH's
- TEA/City Projection of Cost & Rate Increase
 - Rate Increases of 24.5% over 15 Years – Half in First 3 Years

Energy Market is Complex

Capacity versus Energy

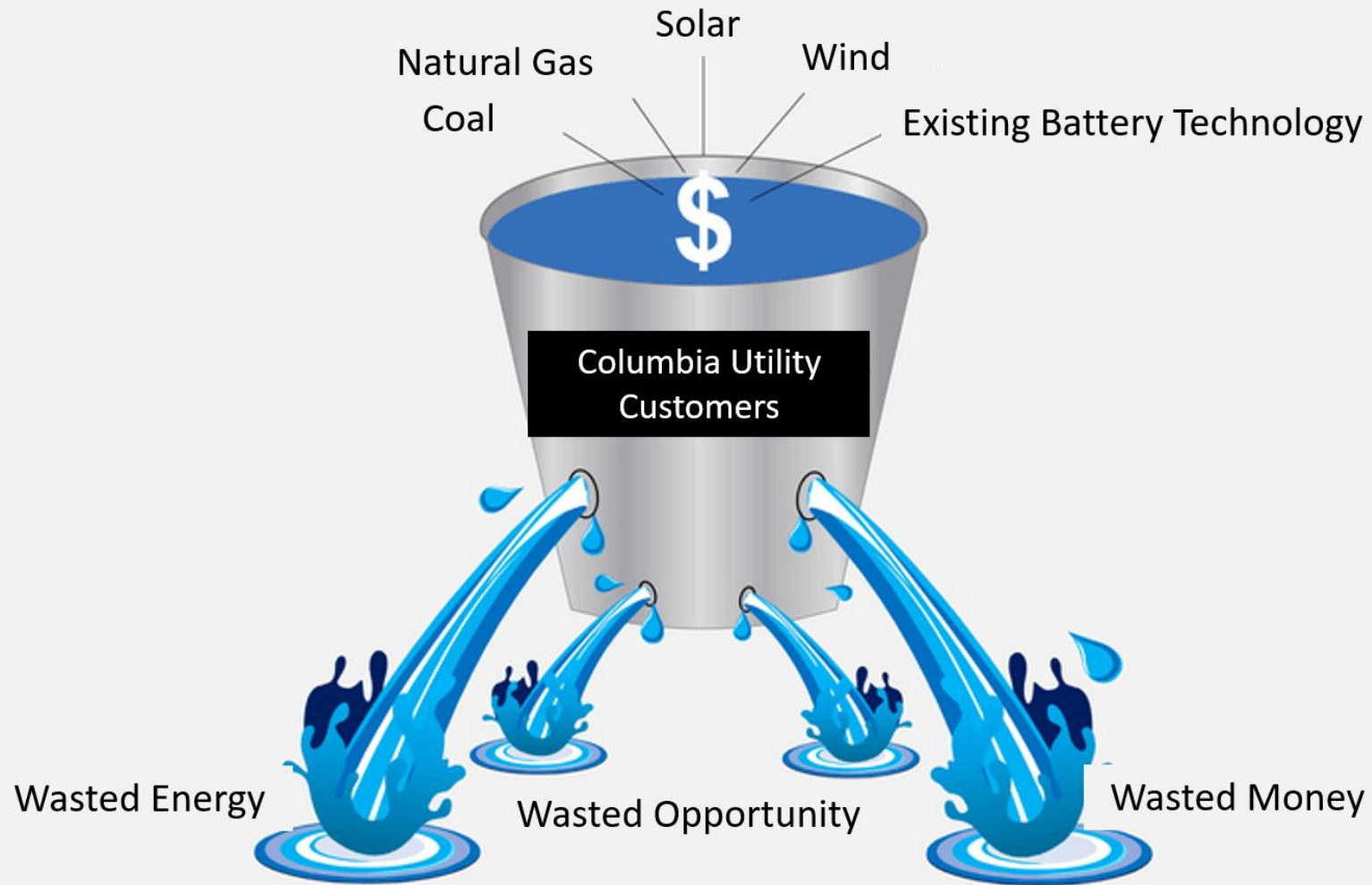
Capacity Factor

Locational Marginal Pricing (LMP)

Financial Transmission Rights
(FTR)

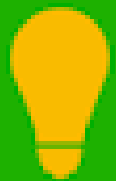


Unsustainable



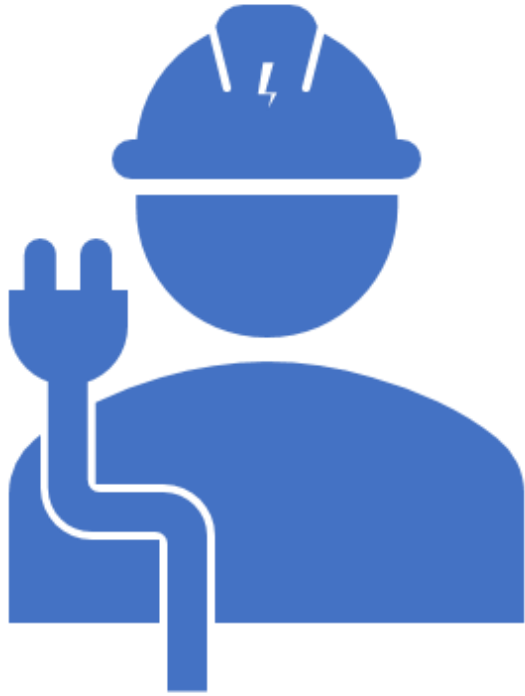
Goal – Use Less

ENERGY EFFICIENCY



- Aims to reduce energy needed for services
- Combats climate change
- Has positive macroeconomic impacts
- Reduces energy costs





Invest in Critical Infrastructure

- Smart Meters
- Overloaded Substations & Circuits
- Education

Thanks for
listening

