



# ***GENERATION PLANNING SIMULATION INTRODUCTION***

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# OBJECTIVES

- 5-year transition
- Minimize new capital investments
- Stop burning coal
- Maintain reliability
- Reduce CO<sup>2</sup> emissions
- Close old natural gas steam plants
- Position CPS Energy to be a quick adopter of new commercialized technologies generating zero emissions



# SIMULATION MODEL



- Simulation of changes to the generation mix
- Uses 4 years of daily historical data
- Provides understanding of generation mix
- Requires assumptions to allow changes to be introduced
- Provides metrics on potential changes for evaluation and discussion



# CHANGES



- Add 900 MW of solar capacity with power purchase agreements
- Convert Spruce 2 coal unit to natural gas
- Add 500 MW of transition green and dispatchable natural gas fueled generators
- Close the old Braunig natural gas steam units
- Close Spruce 1 coal unit



# OUTPUTS

- Does the total fuel cost increase or decrease?
- Does the cost for power purchase agreements change?
- Is there an additional cost for market purchases?
- Does the total emission of CO<sup>2</sup> increase or decrease?
- What is the average monthly impact to the retail bill?





***Thank You***

