



# Assumptions & Inputs

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STAKEHOLDER MEETING #1  
GPA INTEGRATED RESOURCE PLAN 2021

January 2021



# Stakeholder Meeting #1

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- Introduction to Integrated Resource Planning and the Stakeholder Process
- GPA Strategic Issues
- **Assumptions & Inputs**
- Existing Supply Side Resources & Services
- On the Horizon Programs & Projects
- Next Steps & How You Can Contribute
- Q&A / Open Discussion



# GPA Crystal Ball

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*What will the future be?*

*What can we assume?*

*What can we control?*

*How do we know we covered it all?*

*Will others agree?*



# Modeling the Future

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- Capacity Expansion and Generation Optimization programs are used to model long term and short term operation models
  - Replaces Strategist used in previous reports
  - Used to determine the optimal portfolio that eliminates annual capacity deficits according to capacity reserve margin requirements;
  - 30 Year Study Period
  - Evaluates various inputs (Resources, Load, Fuel)
  - Different scenarios can be compared against cost and schedule



# Planning Input Requirements

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## Projections for study period

- Customer Sales
- Peak Load
- Fuel Costs

## Power Generation Options

- Existing Units
- Retirement
- Upgrades

## Upcoming Projects

- Commissioning New Resources (Conventional, Solar PV)
- Fuel Use Transition

## Alternative Resource Options

- ESS (Peak Shaving, Energy Shifting)
- Other Renewables (Firm)
- New Conventional Resources (High Speed, Replace Aged Units, Better Efficiency)



# Projections for study period

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- Customer Sales
  - New customer loads (New Developments, Construction, Military Buildup)
  - Loss of customers (Business closures, COVID impact)
- Peak Load
  - Customer Use / Profile
  - Net Metering Impact
  - DSM Impact
- Fuel Costs
  - Market Impacts
    - COVID
    - MARPOL Annex VI – shipping industry emission reduction
    - Others



# Existing Units & Ongoing Projects

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- What resources are available and what are their operational conditions?
  - Type
  - Permit Limits
  - Operating Costs
  - Maintenance schedule program or availability during study period
- Are there scheduled projects for upgrades and/or life extension of existing units?
  - Incorporate schedules
- Did we capture ongoing / future projects that will impact operations?
  - Commissioning New Resources (Conventional, Solar PV)
  - Fuel Conversion
  - USEPA regulation compliance (SIP, Consent Decree)
- What about unit retiring of units?
- How will Renewables and RPS affect future operations?



# Alternative Resource Options

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- ESS (Peak Shaving, Energy Shifting)
  - Lowers peak and need for generation capacity requirements
- Other Renewables (Firm)
  - New PV with ESS contracts
  - Waste To Energy (dispatchable)
  - New Wind Turbines with ESS contracts
  - Others?
- New Conventional Resources (High Speed, Replace Aged Units, Better Efficiency)
  - Smaller units for reserve requirements
  - High speed for today's electric grid support
  - Distributed systems for Microgrid





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What assumptions do you feel GPA should consider in forecasts, operations or alternative resources?



## Best contacts for questions and information:

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# MORNING BREAK

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Please come back at 9:50AM  
to continue presentations