

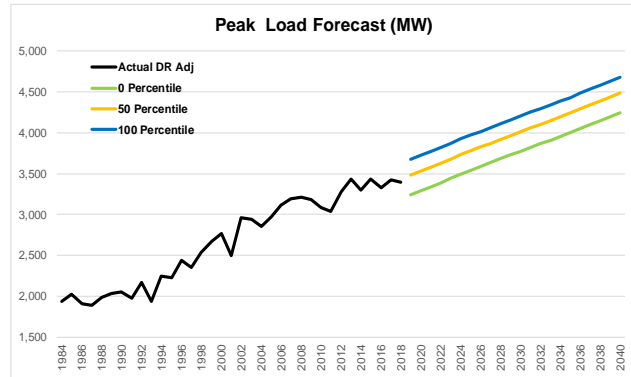


Modeling Scenarios for 2021 IRP

Ian McGetrick, Resource Planning
June 10, 2021



Integrated Resource Plan Construction



Optimized
Resource
Expansion



**Preferred Portfolio
2019 IRP**

Integrated Resource Plan Construction

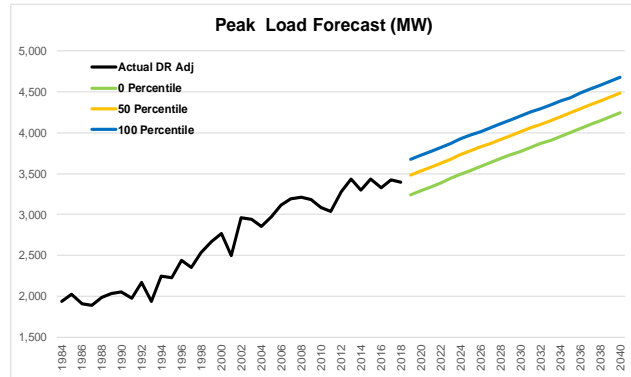


Preferred Portfolio 2019 IRP

	PGPC B2H (1)				
	Bridger Exits 2022, 2026, 2028, 2030 Planning Gas Price Forecast Planning Carbon Price Forecast B2H in service 2026				
	Gas	Solar	Battery	Demand Response	Coal Exit
2019					(127)
2020					(58)
2021					
2022		120			(133) (177)
2023					
2024					
2025					
2026					(180)
2027					
2028					(174)
2029					
2030		40	30	5	(177)
2031	300			5	
2032				5	
2033				5	
2034		40	20	5	
2035		80	20	5	
2036		120	10	5	
2037	56			5	
2038	56			5	
Nameplate Total (MW)	411	400	80	45	(1,026)
B2H	500				
Net Build	410				



Integrated Resource Plan Construction



Optimized
Resource
Expansion



**Preferred Portfolio
2021 IRP**



Idaho Power 2019 IRP

Scenarios for all Portfolios

- Planning gas, planning carbon
- High gas, planning carbon
- Planning gas, high carbon
- High gas, high carbon

Western Electricity Coordinating Council (WECC) Optimized Portfolios

- 24 portfolios developed; 12 with B2H and 12 without B2H

Manually Built Portfolios — Optimized for Idaho Power's System

- 12 including Boardman to Hemingway (B2H)/12 without B2H
- Various coal retirement dates

Manually Built WECC Portfolios

- With and without Valmy early exit



Idaho Power 2021 IRP:

Long Term Capacity Expansion Scenarios for Discussion

Base Scenario

Planning Conditions

- State RPS (NWPPCC)
- With and without B2H
- CSPP Wind Renewal Assumption: 25% renew upon contract expiration

Large Industrial Load Growth with Renewables Offset

- 200 + MW Large Load Growth
- Approximately 900 MW additional renewables for existing/prospective customers for clean energy offsets (solar + wind)

Scenarios (Adjusted from Base)

Clean Energy Goal

- Under development

Climate Change

- Stressed WECC conditions
- Increased hydro variability, high gas price, high load growth

Electrification

- Building electrification (heating/cooling)
- Transportation electrification

CSPP Wind Renewal Assumption

- Scenario 1:50%
- Scenario 2:0%



Idaho Power 2021 IRP:

Long Term Capacity Expansion Base Scenarios

BASE SCENARIOS

Clean 2040

Climate Change

Electrification

CSP Wind Renewal



Idaho Power 2021 IRP:

Sensitivities on Top Performing Portfolios

- SWIP Transmission (Southwest Intertie Project North)
- Additional B2H Capacity
- B2H Price
- Coal Exit Dates
- High Gas Price
- High Carbon Price



Idaho Power 2021 IRP:

Sensitivities on Top Performing Portfolios (Example)

BASE SCENARIOS

Clean 2040

Sensitivities 2

Sensitivities 3

Sensitivities 4

Climate Change

Sensitivities 2

Electrification

Sensitivities 1

Sensitivities 2

Sensitivities 3

Sensitivities 4

CSPP Wind Renewal

Sensitivities 2

Sensitivities 3



Questions/Comments

Thank you!