



# 2021 IRP Introduction

Lisa Grow, President and CEO



An IDACORP Company

# Idaho Power's Clean Energy Goal

Adam Richins,  
SVP and Chief Operating Officer

# Important Notice

Some of the information discussed during today's meeting may be confidential (for business or securities law reasons) or competitive (for anti-trust law reasons). Thus, please treat as confidential and sensitive any discussion and/or information provided by Idaho Power of topics marked as CONFIDENTIAL in the slides during this meeting, unless and until Idaho Power itself discloses the information publicly.

If you are uncertain whether information is either confidential or competitive, or whether any particular information has been publicly disclosed, please ask. Adhering to this practice helps protect both you and Idaho Power.



# Introductions

Jared Hansen, Resource Planning

# Our Values

**Safety First:** We are committed to the safety of our employees, our customers and the communities we serve.

**Integrity Always:** Customers, shareholders and employees can count on us to be fair and ethical.

**Respect for All:** We treat our customers, partners, employees and the environment with care and dignity.

# Remote Meetings – What to Expect

**F** O C U S

# Ways to Contact Us

[idahopower.com/IRP](https://idahopower.com/IRP) -> **Public Input**

email us at [✉ irp@idahopower.com](mailto:irp@idahopower.com)

# Agenda

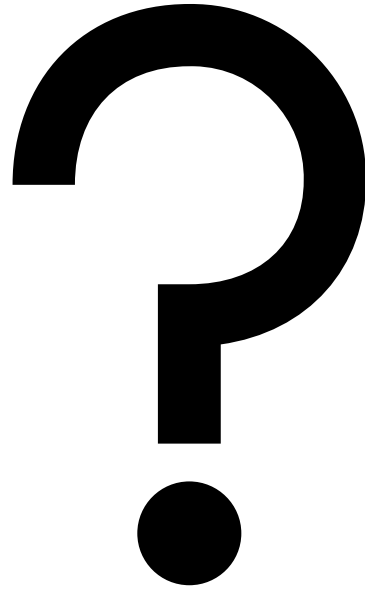
Tuesday, February 9th, 2021 (IRPAC Meeting #1)		
<i>Allotted Time</i>	<i>Discussion Topic</i>	<i>Presenter</i>
9:00-9:15	Introduction	Lisa Grow
9:15-9:35	Idaho Power Clean Energy Goal	Adam Richins
9:35-11:05	2019 IRP in Review	Ian McGetrick
11:05-11:20	<i>Break</i>	
11:20-12:45	2021 IRP Schedule, Process Overview, & Process Road Map	Jared Hansen
12:45-1:15	<i>Lunch</i>	
1:15-2:00	2021 IRP Carbon Outlook	John Carstensen
2:00-2:45	Valmy Unit 2 Study Outline	Curtis Westhoff
2:45-3:00	Discussion Wrap-Up	Jared Hansen



# Shorter Agenda

Tuesday, February 9th, 2021 (IRPAC Meeting #1)		
<i>Allotted Time</i>	<i>Discussion Topic</i>	<i>Presenter</i>
9:00-9:15	Introduction	Lisa Grow
9:15-9:35	Idaho Power Clean Energy Goal	Adam Richins
9:35-10:00	2019 IRP in Review	Ian McGetrick
10:00-10:45	2021 IRP Schedule, Process Overview, & Process Road Map	Jared Hansen
10:45-10:55	<i>Break</i>	
10:55-11:25	2021 IRP Carbon Outlook	John Carstensen
11:25-11:55	Valmy Unit 2 Study Outline	Curtis Westhoff
11:55-12:00	Discussion Wrap-Up	Jared Hansen

Q&A





# 2019 IRP In Review

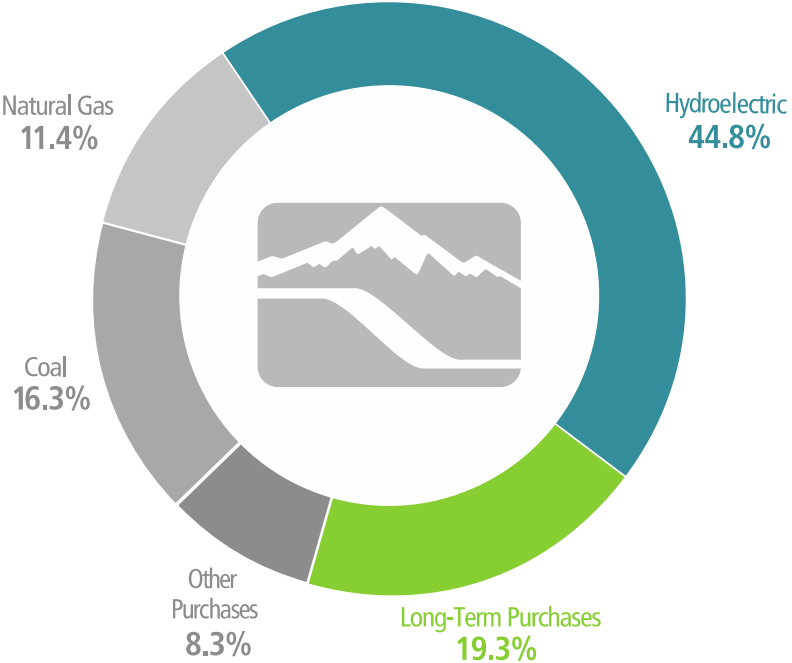
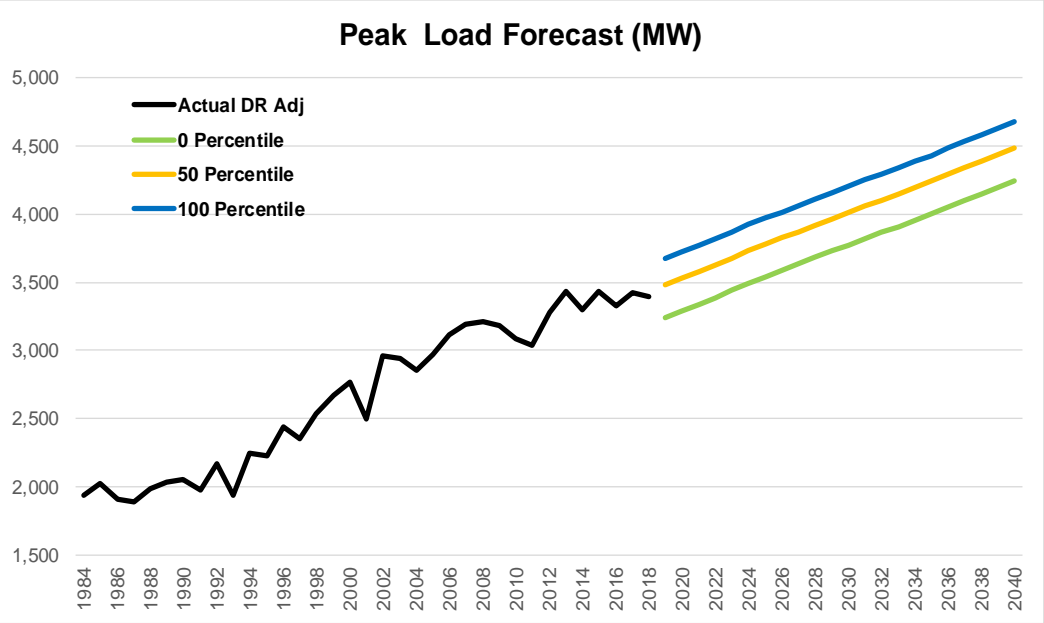
Ian McGetrick, Resource Planning



# 2021 IRP Overview

Jared Hansen, Resource Planning

# Process



# Process - Balance



# Process - Balance

Cost



Risk

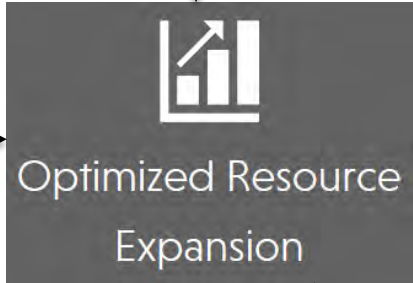
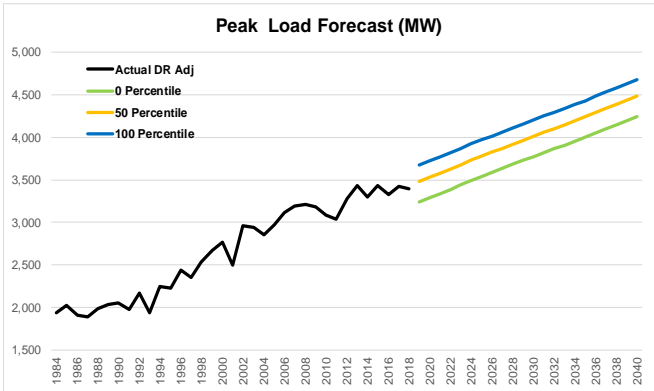
Environment

# Process - Involving the Public



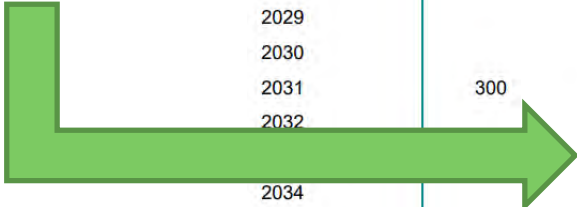


# 2019 Integrated Resource Plan

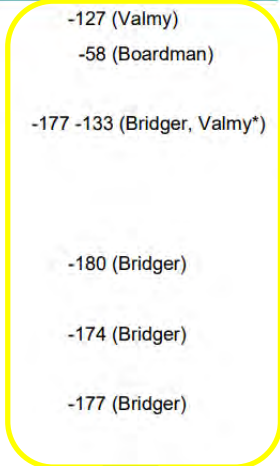
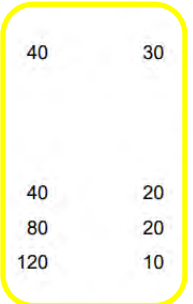


	PGPC B2H (1)				
	Gas	Solar	Battery	Demand Response	Coal Exit
2019					(127)
2020					(58)
2021					
2022		120			(133) (177)
2023					
2024					
2025					
2026					(180)
2027					
2028					(174)
2029					
2030		40	30	5	(177)
2031	300			5	
2032				5	
2033				5	
2034		40	20	5	
2035		80	20	5	
2036		120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

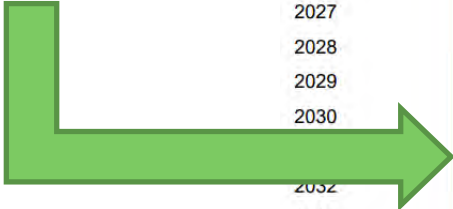
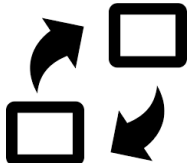
# Evolution



	Gas	Solar	Battery	Demand Response	Coal Exit
2019					-127 (Valmy)
2020					-58 (Boardman)
2021					
2022		120			-177 -133 (Bridger, Valmy*)
2023					
2024					
2025					
2026					-180 (Bridger)
2027					
2028					-174 (Bridger)
2029					
2030		40	30	5	-177 (Bridger)
2031	300			5	
2032				5	
2033				5	
2034		40	20	5	
2035		80	20	5	
2036		120	10	5	
2037	55.5			5	
2038	55.5			5	
<b>Nameplate Total</b>	<b>411</b>	<b>400</b>	<b>80</b>	<b>45</b>	<b>-1,026</b>
B2H (2026)	500				



# Evolution



	Gas	Solar	Battery	Demand Response	Coal Exit
2019					-127 (Valmy)
2020					-58 (Boardman)
2021					
2022		120			-177 -133 (Bridger, Valmy*)
2023					
2024					
2025					
2026					-180 (Bridger)
2027					
2028					-174 (Bridger)
2029					
2030	300	40	30	5	-177 (Bridger)
2032				5	
2033				5	
2034		40	20	5	
2035		80	20	5	
2036		120	10	5	
2037	55.5			5	
2038	55.5			5	
<b>Nameplate Total</b>	<b>411</b>	<b>400</b>	<b>80</b>	<b>45</b>	<b>-1,026</b>
B2H (2026)	500				

# Evolution



	Gas	Solar	Battery	Demand Response	Coal Exit
2019					-127 (Valmy)
2020					-58 (Boardman)
2021					
2022		120			-177 -133 (Bridger, Valmy*)
2023					
2024					
2025					
2026					-180 (Bridger)
2027					
2028					-174 (Bridger)
2029					
2030		40	30	5	-177 (Bridger)
2031	300			5	
2032				5	
2033				5	
2034		40	20	5	
2035		80	20	5	
2036		120	10	5	
2037	55.5			5	
2038	55.5			5	
<b>Nameplate Total</b>	<b>411</b>	<b>400</b>	<b>80</b>	<b>45</b>	<b>-1,026</b>
B2H (2026)	500				

# Evolution

## Delivery Planning

T&D Planning  
System Planning  
T&D Strategies



## Power Supply

Resource Planning



# Evolution

Planning

Power Supply

T&D Planning  
System Planning  
T&D Strategies

A green square containing the text 'T&D Planning', 'System Planning', and 'T&D Strategies' stacked vertically. Below the text is a black icon of 12 stylized human figures holding hands in a line.

Resource Planning

A green square containing the text 'Resource Planning'. Below the text is a black icon of 4 stylized human figures holding hands in a line.

# Evolution – Tools



## IRP Capabilities

- Long-Term Capacity Expansion
- Risk analysis features like stochastic runs and loss of load
- Costing models
- Seamless integration between functions – single model

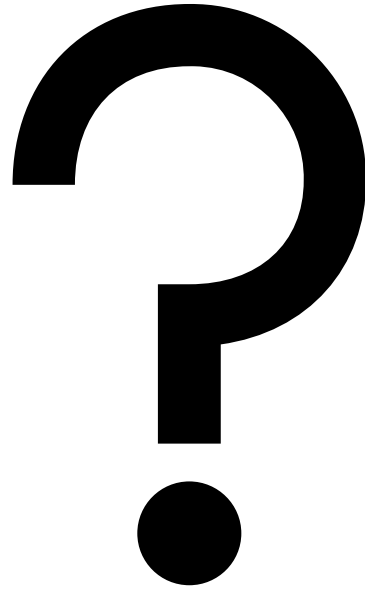
## Collaboration

- Used by peer utilities and others across the country
- Commonly used in third-party analyses
- Used by Idaho and Oregon Commission Staff

## Multiple Applications

- Used in developing rate cases
- Power Cost Adjustment
- PURPA Pricing Model
- Other Regulatory proceedings

Q&A

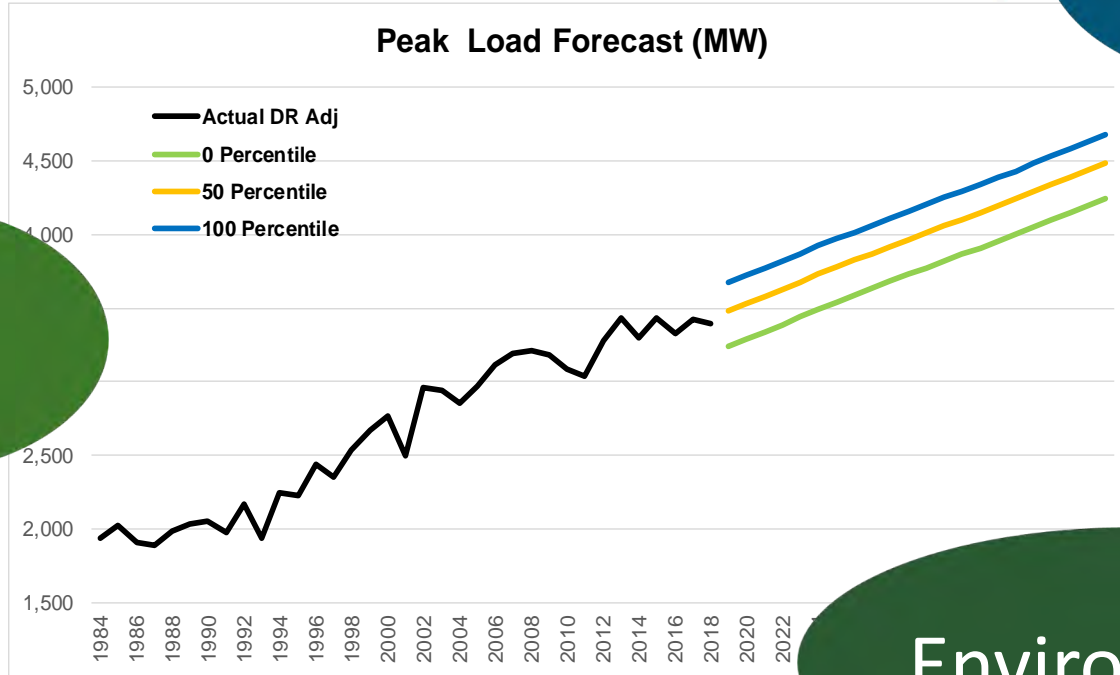




# Goals

Risk

Cost



Environment

# Goals

Risk Metrics

Portfolio Development

Validation and Verification

Storage and Renewables

Energy Efficiency

Demand Response

# Scope

## In Scope

- Natural gas price forecasts
- Load forecast
- Future resources
  - Flexible (natural gas, nuclear, hydrogen)
  - Intermittent (solar, wind)
  - Transmission
- Storage
- Carbon costs
- Coal exits
- Energy Efficiency modeling
- Demand Response

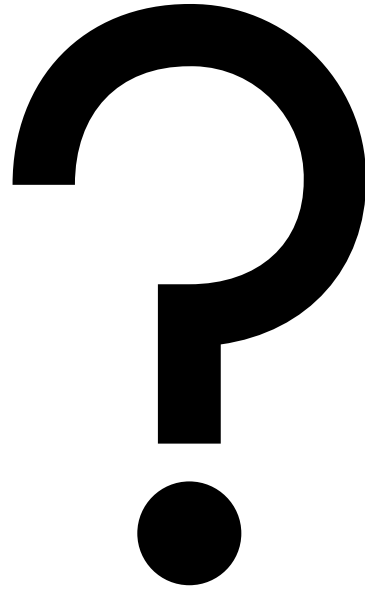
## Out of Scope

- Energy Efficiency measures
- Local electrical infrastructure

# Meeting Topics and Flow

Meeting	Date	Topics
Energy Efficiency Subcommittee Meeting	January 12	Energy Efficiency
IRPAC Meeting #1	February 9	Overview, Carbon Outlook
Load Forecast Workshop	February 23	Load Forecast
IRPAC Meeting #2	March 11	Forecasts (PURPA Generation, Natural Gas, Load, Hydro)
IRPAC Meeting #3	April 8	Solar & Storage, Energy Efficiency (EE), Distributed Energy Resources (DER), Demand Response (DR)
IRPAC Meeting #4	May 13	Resource Adequacy, Transmission, Future Supply-Side Resources
IRPAC Meeting #5	June 10	Transmission & Distribution (T&D) Deferral, Reserve Requirements, Storage
IRPAC Meeting #6	July 13	Portfolio Development & Sensitivities, Risk Metrics
Optional: Analysis Update & Feedback Workshop	August 10	
IRPAC Meeting #7	September 16	Results, Preferred Portfolio

Q&A



# Water Break





# 2021 IRP Carbon Outlook

John Carstensen, Joint Projects



# Valmy Unit #2 Study Outline

Curtis Westhoff,  
System Consulting Engineer





# Discussion Wrap-Up

Jared Hansen, Resource Planning