

**PUBLIC SERVICE COMMISSION
OF UTAH**

Docket No. 12-035-92

SIERRA CLUB EXHIBIT 36

2013 Integration [sic] Resource Plan. Portfolio
Development Cases Sensitivity Case Fact Sheets.
February 27, 2013, Excerpt pp. 7-8

Theme: Environmental Policy Sensitivities
Sensitivity: S-4 (Hypothetical Regional Haze Compliance Alternative)

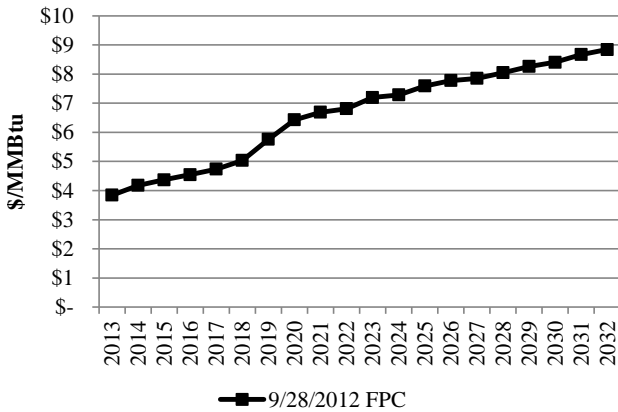
Description

Sensitivity S-4 will explore hypothetical compliance alternatives to near-term Regional Haze-based emissions control investments. For this sensitivity, it is assumed that near-term SCR investments currently required at Jim Bridger Units 3&4 and at Cholla Unit 4 can be avoided if a commitment is made to retire those coal units early. The selection of hypothetical retirement dates in this sensitivity is informed by an evaluation of the cost per ton of pollutant removed; much the same as such information would be factored into a BART analysis. This sensitivity is a variant of Core Case C-03 assuming Energy Gateway Scenario EG-2. The results of Sensitivity S-4 will be presented in Confidential Volume 3 of the 2013 IRP.

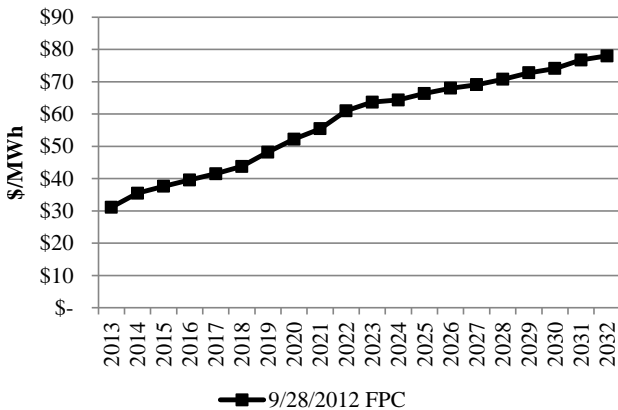
Forward Price Curve

Sensitivity S-4 gas and power prices will utilize medium natural gas and CO₂ price assumptions consistent with the Company's September 28, 2012 official forward price curve.

Nominal Average Annual Henry Hub Gas Prices



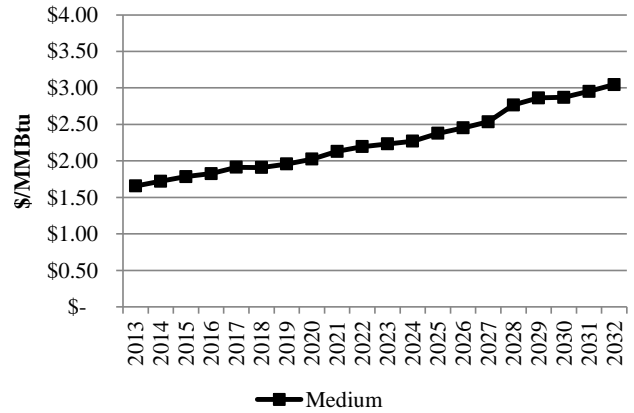
Nominal Average Annual Power Prices (Flat)



Coal Fuel Costs

Medium coal prices will be used. The figure below shows the medium fleet-wide average coal costs.

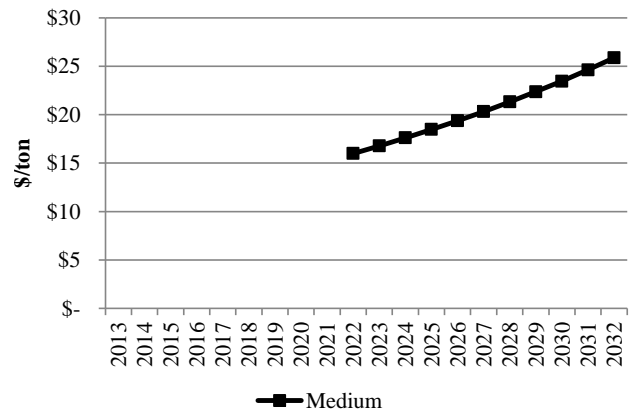
Fleet-wide Average Coal Fuel Cost



Federal CO₂ Policy/Price Signal

Sensitivity S-4 includes medium CO₂ prices starting 2022 at \$16/ton rising to approximately \$26/ton by 2032.

Nominal Federal CO₂ Prices



Regional Haze

For those units that are not being analyzed as part of this sensitivity, base case Regional Haze investments patterned after known state implementation plan requirements and potential long-term requirements will be applied.

Coal Unit	State	Technology*	Year
J. Bridger 1	WY	SCR	2022
J. Bridger 2	WY	SCR	2021
Hunter 1	UT	BH, LNB	2014
Hunter 2	UT	SCR	2023
Hunter 3	UT	SCR	2024
Huntington 1	UT	SCR	2026
Huntington 2	UT	SCR	2023
Hayden 1	CO	SCR	2015
Hayden 2	CO	SCR	2016
Craig 1	CO	SNCR	2017
Craig 2	CO	SCR	2016

*SNCR = selective non-catalytic reduction; SCR = selective catalytic reduction; LNB = low NOx burner; BH = baghouse

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Other Non-CO₂ Environmental Policy Assumptions

Sensitivity S-4 will include estimated costs to achieve compliance with the following:

- Mercury and Air Toxics (MATS)
- Coal Combustion Residuals (CCR) under subtitle D of RCRA
- Cooling water intake structures under §316(b) of the Clean Water Act

Federal RPS

Sensitivity S-4 will include the following federal RPS assumptions:

- Targets applied to retail sales (adjusted for non-qualifying hydro)
- 4.5% in 2018
- 7.1% in 2019 – 2020
- 9.8% in 2021 – 2022
- 12.4% in 2023 – 2024
- 15% by 2025

State RPS

Known state RPS requirements with targets as a percentage of retail sales (by year-end but for WA, which is Jan 1st):

- CA: 20% through 2013, 25% by 2016, 33% by 2020
- OR: 5% by 2011; 15% by 2015; 20% by 2020, 25% by 2025
- WA: 3% by 2012; 9% by 2016; 15% by 2020
- UT: 20% of adjusted retail sales by 2025

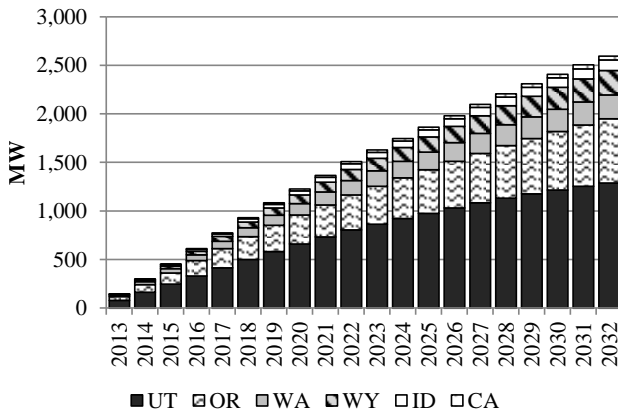
Federal Tax Incentives

- PTCs expire end of 2012
- ITCs expire end of 2016

Energy Efficiency (Class 2 DSM)

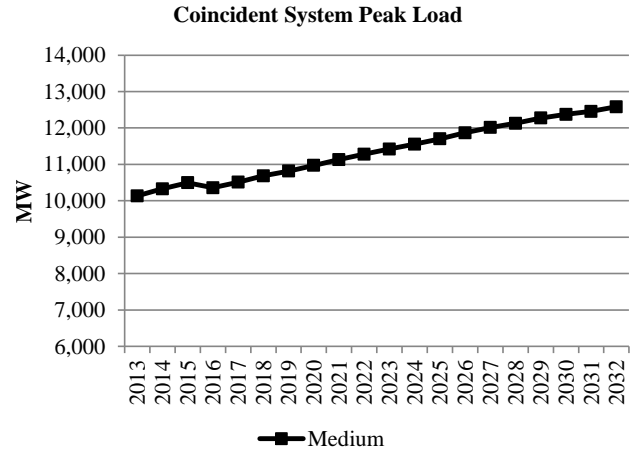
Base case supply curves and ramp rates with resource selections up to the achievable potential. Class 2 resources that are not selected in any given year are not available for selection in future years. Achievable potential by state and year are summarized below.

Class 2 DSM Cumulative Achievable Potential



Load Forecast

The medium load forecast will be used. The figure below shows the system coincident peak load forecast before accounting for any potential contribution from DSM or distributed generation resources.



Resource Specific

The Jim Bridger Unit 3 and Unit 4 S-4 Sensitivity will assume that if Units 3 and 4 are retired at the end of 2020 and 2021, respectively, SCR investments currently required in 2015 and 2016 can be avoided. The selection of the hypothetical retirement dates of 2020 and 2021 in this sensitivity is informed by an evaluation of the cost per ton of pollutant removed. In the case of Jim Bridger Units 3 and 4, the cost per ton of pollutant removed does not exceed a value that would likely be deemed excessive by EPA until the outer most years of unit operation. As such, a second criterion limiting the hypothetically negotiable compliance delay window to 5-years beyond the current compliance deadline is applied.

The Cholla 4 S-4 Sensitivity will assume that the unit is retired at the end of 2023 and that the SCR investment required in 2017 can be avoided. Again, the selection of the hypothetical retirement date of 2023 in this sensitivity is informed by an evaluation of the cost per ton of pollutant removed. In this case, the cost per ton of pollutant removed begins an upward trend in 2023 that that hypothetically could be deemed excessive by EPA. As such, a second criterion limiting the hypothetically negotiable compliance delay window to 5-years beyond the current compliance deadline is not applied.