

# TABLE OF CONTENTS

	<u>Page</u>
1. EXECUTIVE SUMMARY .....	1-1
2. INTRODUCTION AND BACKGROUND .....	2-1
Wexpro II Agreement and Gas-Producing Property Acquisitions .....	2-9
Wyoming IRP Process .....	2-10
Utah IRP Process .....	2-11
Exhibit.....	2-16
3. CUSTOMER AND GAS DEMAND FORECAST .....	3-1
System Total Temperature Adjusted Dth Sales and Throughput .....	3-1
Temperature-Adjusted Dth Sales and Throughput Summary - 2015 IRP .....	3-1
Residential Usage and Customer Additions .....	3-2
Small Commercial Usage and Customer Additions .....	3-3
Large Commercial, Industrial and Electric Generation Gas Demand .....	3-4
Firm Customer Design-Day Gas Demand .....	3-4
Periods of Interruption .....	3-4
Source Data.....	3-5
Utah and Wyoming Economic Outlook.....	3-5
The U.S. Economic Outlook.....	3-6
Alternatives to Natural Gas.....	3-7
Lost and Unaccounted For Gas.....	3-10
Exhibits .....	3-12 - 3-22
4. SYSTEM CAPABILITIES AND CONSTRAINTS .....	4-1
Questar Gas System Overview .....	4-1
Ongoing and Future System Analysis Projects.....	4-2
System Modeling and Reinforcement.....	4-3
Model Verification.....	4-3
Gate Station Flows vs. Capacity .....	4-4
System Pressures.....	4-4
System Capacity Conclusions.....	4-10
DNG Action Plan.....	4-11
Management Plan Activities and Associated Costs.....	4-19
Transmission Integrity Management .....	4-20
Distribution Integrity Management.....	4-22
Key Performance Integrity Metrics .....	4-23
New Regulations That May Impact Future Costs.....	4-23
Environmental Review.....	4-31
5. PURCHASED GAS.....	5-1
Local Market Environment.....	5-1
Annual Gas Supply Request for Proposal (RFP).....	5-2
Price Stabilization .....	5-4

	Exhibit.....	5-5
6.	COST-OF-SERVICE GAS.....	6-1
	Cost of Service (COS) Modeling Factors.....	6-1
	Producer Imbalances.....	6-4
	Future Resources.....	6-5
	Production Shut-Ins.....	6-6
	Exhibit.....	6-8
7.	GATHERING, TRANSPORTATION AND STORAGE.....	7-1
	Gathering and Processing Issues.....	7-1
	Transportation and Storage Contracts.....	7-3
	Storage Issues.....	7-8
	Other Issues.....	7-14
	Exhibits.....	7-16 to 7-22
8.	ENERGY-EFFICIENCY PROGRAMS.....	8-1
	Utah Energy-Efficiency Results 2014.....	8-1
	EE Effects on Peak Day.....	8-4
	Wyoming Energy-Efficiency Results 2014.....	8-4
	Utah Energy-Efficiency Plan 2015.....	8-5
	Utah ThermWise Energy Comparison Report.....	8-7
	Wyoming Energy-Efficiency Plan 2015.....	8-8
	SENDOUT Model Results for 2015.....	8-9
	Avoided Costs Resulting from Energy Efficiency.....	8-10
	Exhibit.....	8-11
9.	FINAL MODELING RESULTS.....	9-1
	Linear Programming Optimization Model.....	9-1
	Constraints and Linear Programming.....	9-1
	Model Improvements.....	9-2
	Monte Carlo Method.....	9-3
	Natural Gas Price.....	9-3
	Weather and Demand.....	9-4
	Peak Day and Baseload Purchase Contracts.....	9-4
	Normal Temperature Case.....	9-5
	Purchased-Gas Resources.....	9-6
	Cost-of-Service Gas.....	9-6
	First-Year and Total System Costs.....	9-6
	Gas Supply/Demand Balance.....	9-7
	Exhibits.....	9-8 to 9-97
10.	GENERAL IRP GUIDELINES/GOALS FOR GAS SUPPLY AND ENERGY EFFICIENCY RESOURCES.....	10-1
11.	APPENDIX A.....	11-1