2021-2022 IRP Technical Conference May 18, 2021



2021 IRP Schedule

February 9, 2021 – Technical Conference

- Review of IRP Standards and Guidelines
- Review of 2020 PSC Order Regarding IRP
- March 2020 Stakeholder Meeting Review
- Rural Expansion Update
- LNG Update
- Hedging

May 18, 2021 – Technical Conference

- IRP Project Detail Discussion
- Long Term Planning Update
- Hydrogen Pilot Update
- Future STEP Project Update

A	pril 28, 2021 – Technical Conference	June 22, 2021 – Technical Conference		
	CONFIDENTIAL MEETING	 Presentation and Review of 2021-2022 IRP 		
•	Heating Season Review			
•	System Integrity Update			

- Wexpro Matters (Confidential)
- RFP Review (Confidential)



IRP Project Detail



2021-2022 Distribution Action Plan

• High Pressure Projects:

Year	Project	Estimated Cost	Revenue Requirement
	LE0021 – District Regulator Station for American Fork and Lehi	\$750,000	\$85,600
	LG0012 Logan District Regulator Station and Feeder Line Extension	\$4,500,000	\$514,000
2021	Eureka – EU0001 District Regulator	\$600,000	\$68,500
	WA1600 – District Regulator Station North Temple Replacement for Belt Line Capacity	\$750,000	\$85,600
	Central 20-inch Loop (Phase 1)	\$32,813,000	\$3,806,308
	SY0002 Syracuse District Regulator Station	\$500,000	\$57,100
	FL047 Extension for SY0002 Syracuse District Regulator Station	\$5,500,000	\$628,000
2022	WA1604 – Replace WA0866 District Regulator Station for South Salt Lake City, UT	\$1,500,000	\$171,300
	FL13 West HP Station and ILI Facilities, Magna, UT	\$900,000	\$102,800
	FL13 East HP Station and ILI Facilities, Salt Lake City, UT	\$2,800,000	\$319,800
	Jamestown, WY District Regulator Station	TBD	TBD
	White Dome District Regulator Station (St George)	TBD	TBD
	Bluffdale District Regulator Station	TBD	TBD
2023	TG0005 Saratoga KRGT Gate Station	\$2,000,000 to \$5,000,000	\$232,000+
	Eagle Mountain District Regulator Station, near 4000 N and Hwy 73	\$500,000	\$57,100
	FL85 Extension for Eagle Mountain District Regulator Station	\$3,000,000	\$342,600
2025	Central 20-inch Loop (Phase 2)	TBD	TBD
2028	Central 20-inch Loop (Phase 3)	TBD	TBD
TBD	RE0027 HP Station Capacity Upgrade	TBD	TBD



2021-2022 Distribution Action Plan

- Feederline Replacement
 - FLR is meeting with the PSC on June 21, 2021 to provide a detailed report.
- Rural Expansion Eureka
 - IHP and HP projects have been awarded to Fugal. Construction to start June 2021.
 - Completion on track for heating season 2021-2022.
- Plant Projects
 - On-System LNG
 - EPC contract awarded on May 15, 2020 to Matrix Currently under construction.
 - The tank roof is being raised today (May 18, 2021).
- Intermediate-High Pressure Projects
 - Belt Main Replacement Program
 - Aging Infrastructure Replacement (Not included in the Infrastructure Rate Adjustment Tracker)
- Transponder Replacement Program
 - Completed in 1st Quarter 2021. Now transitioning to regular maintenance schedule.



Long-Term Planning



Long Term Planning – Historical Growth

	2017	2018	2019	2020	2021
Peak Day Growth	2.51%	1.83%	3.03%	0.64%	1.66%
Customer Growth	2.76%	2.28%	2.60%	2.35%	2.45%

Average yearly growth (over past 5 years):

- 2.0% for Peak Day Demand
- 2.6% for Customer Count



Projected Population Growth

Kem C. Gardner Policy Institute Population Change

Top 6 counties with 50-year absolute population increases shown





Kem C. Gardner Policy Institute 2015-2065 State and County Projections P. 20

720 psig Corridor

Demand growth will drive projects and require reinforcements

Aging infrastructure will be replaced which still comprises a significant portion of the system

The 720 psig corridor will continue to extend from Payson to Hyrum





Future Transportation Capacity

In the long-term, the Company will require investment in upstream pipeline systems to increase capacity to the Wasatch Front.

The Company is considering constructing a new Ruby Pipeline gate station near Brigham City.





Saratoga Tap to Central

First, the Company is considering increasing the size of FL85, that runs from the Saratoga KRGT gate station to the Central HP system, to increase supply. Doing so will increase the takeaway capacity downstream of the KRGT gate station at Saratoga Springs and will increase flows to the central HP system.





Modular LNG Sites and RNG

The Company is considering constructing modular LNG sites throughout its system.

The Company is also considering constructing RNG sites as possible supply resources that would both provide renewable natural gas on the Company's system, and could address system concerns as well.





Hydrogen Pilot Update



Why Hydrogen?

- Hydrogen is not a greenhouse gas
- When burned, hydrogen does not emit greenhouse gases
- Blending renewable hydrogen into the natural gas system lowers its carbon footprint
- Hydrogen is not a greenhouse gas and can be created using renewable electricity through electrolysis





Hydrogen at Dominion Energy

- Goal to be net zero carbon equivalents by 2050
- A related goal is to be ready to blend 5% hydrogen into system by 2030
- ThermH₂, Phase 1
 - <u>Objective</u>: To validate current research and gain operational experience with hydrogen blends up to 5% in the distribution piping configurations
 - This first phase includes building a system to blend hydrogen at our Training Facility and coordinate appropriate tests to meet our objective





ThermH₂, Phase 1

Testing

Safety:

- Test residential appliances for safe operation
- Test gas odorant levels
- Conduct hydrogen leak test
- Leak Survey:
 - Confirm current equipment usability with blended gas
- NOx Emissions:
 - Test multiple residential appliances for changes in NOx emissions
- Material Tests:
 - Test steel pipe for changes in material properties after exposure to blended gas
- Partnered with GTI for testing





ThermH₂, Phase 1

Where are we now?

- The blending facility has been built
- Commissioning is complete
- Initial tests have started





STEP Update



HB107 – Sustainable Transportation Energy Plan Update

IIAC Update

- Intermountain Industrial Assessment Center funding is \$500k per year over a two-year pilot period.
- Funding allows the IIAC to move beyond its DOE-mandate of performing assessments in the manufacturing sector and expand services to other businesses.
- The IIAC will perform 20 additional energy efficiency assessments and 40 clean air assessments per year with STEP funding.
- Program was to begin October 1, 2020 but was delayed until March 1, 2021 due to COVID-19 issues.
- First assessment, performed at a Cache Valley dairy, is in the process of being finalized.

Potential Natural Gas Vehicle STEP Program

- DEU is currently designing a potential STEP program to incentivize adoption of ultra low-NOx CNG engines.
- Incentives would target large class engines (ex. buses, refuse trucks, box trucks, snow removal, semis, or locomotives).
- At .02 g/bhph, ultra-low NOx CNG engines emit 90% less NOx than today's diesel engines.
- Following completion of design and clean air analysis, DEU will submit the potential program to the Commission for approval.



Questions?

