2009 Avista Natural Gas IRP

Technical Advisory Committee Meeting

June 16, 2009

Portland, Oregon

Agenda

- Introductions & Logistics
- Demand Sensitivities & Scenarios Update
- SENDOUT® Overview & Cases
- Demand-Side Management
- 2009 IRP Schedule

Demand Sensitivities & Scenarios Update

Proposed Sensitivities

Demand Influencing (Direct)

Model Sensitivities			DEMAND INFLUENCING - DIRECT							
		Reference Case	Low Cust Growth	High Cust Growth	Cold Day 20yr Weather Std	CNG Vehicles	1HDD Lower Weather Std	Northern Migration	Stagnant Growth	Global Warning
INPUT ASSUMPTIONS										
Customer Growth Rate										
Residential	WA/ID	2.2%								
Residential	Medford	2.6%								
Residential	Roseburg	3.6%								
Residential	Klamath	1.9%	50% Decrease in Cust Growth Rates	50% Increase in Cust Growth Rates				???	???	
Residential	La Grande	1.4%								
Commercial	WA/ID	2.3%								
Commercial	Medford	1.2%								
Commercial	Roseburg	2.1%								
Commercial	Klamath	1.9%								
Commercial	La Grande	0.6%								
Use per Customer		Flat				15% Growth Cumulative				
Weather										
Planning Standard		Coldest Day			Coldest 20yrs		Coldest-1HDD			???
Prices										
Price curve		Expected								
Elasticity		None								
Carbon Adder ($/Ton)		None								
Coal to gas adder ($/Dth)		None								
Drilling Constraints ($/Dth)										

Proposed Sensitivities

Price Influencing (Indirect)

Model Sensitivities			PRICE INFLUENCING - INDIRECT										
		Reference Case	Expect Elasticity	Low Elasticity	High Elasticity	Low Prices	High Prices	Carbon Mitigate 1	Carbon Mitigate 2	Cdn Imports Decline	Drilling Constraints	DSM Accelerated	DSM Delayed
INPUT ASSUMPTIONS													
Customer Growth Rate													
Residential	WA/ID	2.2%											
Residential	Medford	2.6%											
Residential	Roseburg	3.6%											
Residential	Klamath	1.9%											
Residential	La Grande	1.4%											
Commercial	WA/ID	2.3%											
Commercial	Medford	1.2%											
Commercial	Roseburg	2.1%											
Commercial	Klamath	1.9%											
Commercial	La Grande	0.6%											
Use per Customer		Flat											
Weather													
Planning Standard		Coldest Day											
Prices													
Price curve		Expected	Expected	Expected	Expected	Low	High	Expected	Expected	Expected	Expected		
Elasticity		None	Expected	Low	High	Expected	Expected	Expected	Expected	Expected	Expected		
Carbon Adder ($/Ton)		None						$5-$67	$37-$140			???	???
Coal to gas adder ($/Dth)		None						$.50-$1.00	$.50-$1.00	$.50 incremental			
Drilling Constraints ($/Dth)											$1.00		

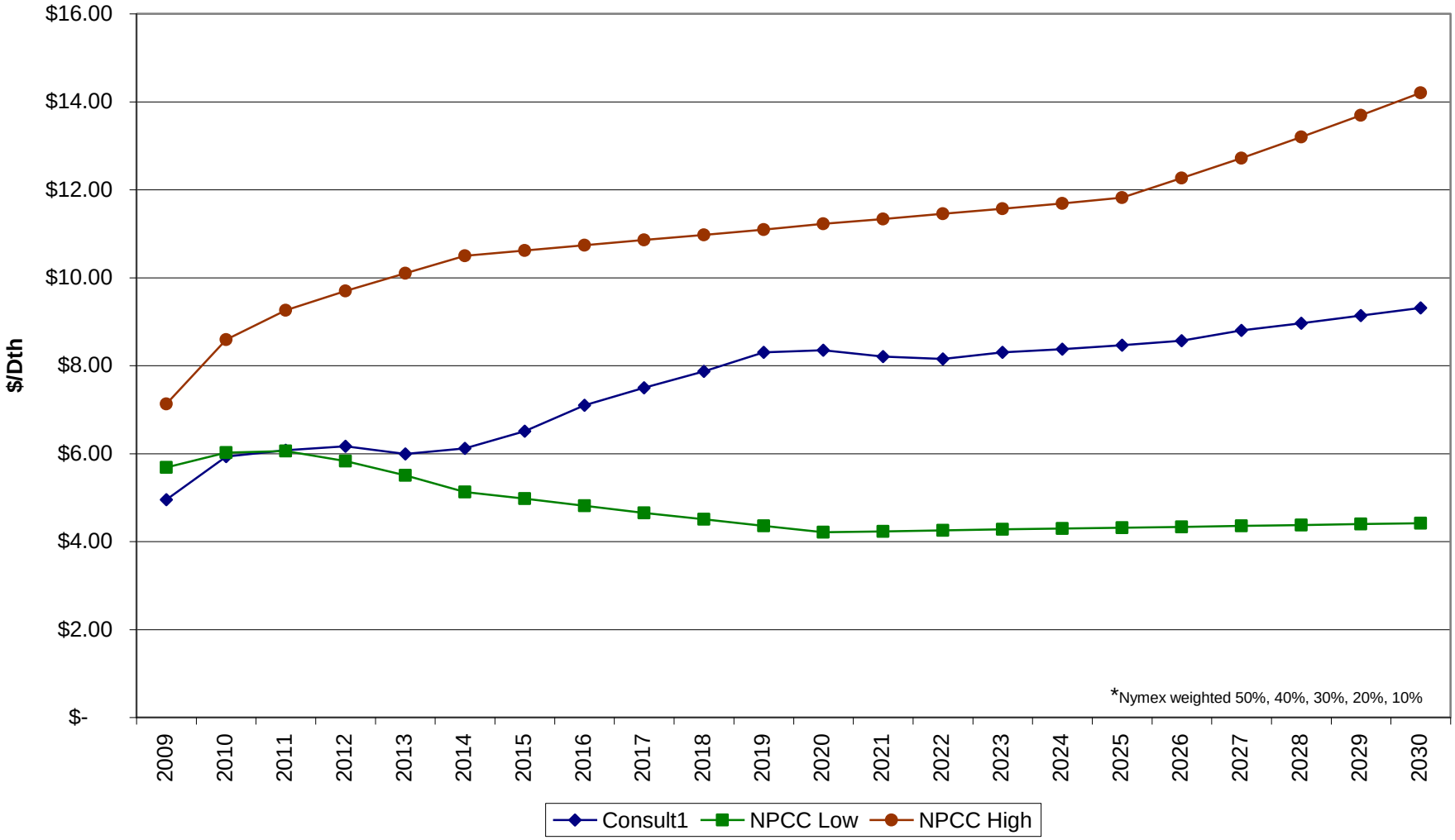
Proposed Scenarios

Model Scenarios	Expected Case	Low Growth & High Prices	High Growth & Low Prices	Green Future	Cold Day 20yr Weather Std
INPUT ASSUMPTIONS					
Customer Growth Rate	Reference Case Cust Growth Rates	50% Decrease in Cust Growth Rates	50% Increase in Cust Growth Rates	Reference Case Cust Growth Rates	Reference Case Cust Growth Rates
Use per Customer	Flat + Price Elast.	Flat + Price Elast.	Flat + Price Elast.	Flat + Price Elast.	Flat + Price Elast.
Weather					
Planning Standard	Coldest Day	Coldest Day	Coldest Day	Coldest Day	CD 20 yrs
Prices					
Price curve	Expected	High	Low	Expected	Expected
Elasticity	Expected	High	Low	High	Expected
Carbon Adder ($/Ton)	$5-$67	$5-$67	$5-$67	$37-$140	$5-$67
Coal to Gas Adder ($/Dth)	$.50-$1.00	$.50-$1.00	$.50-$1.00	$.50-$1.00	$.50-$1.00
Drilling Constraints ($/Dth)	None	$1.00	None	$1.00	None

Henry Hub Price Forecasts for IRP

Nymex blend first five years*

2009$/Dth

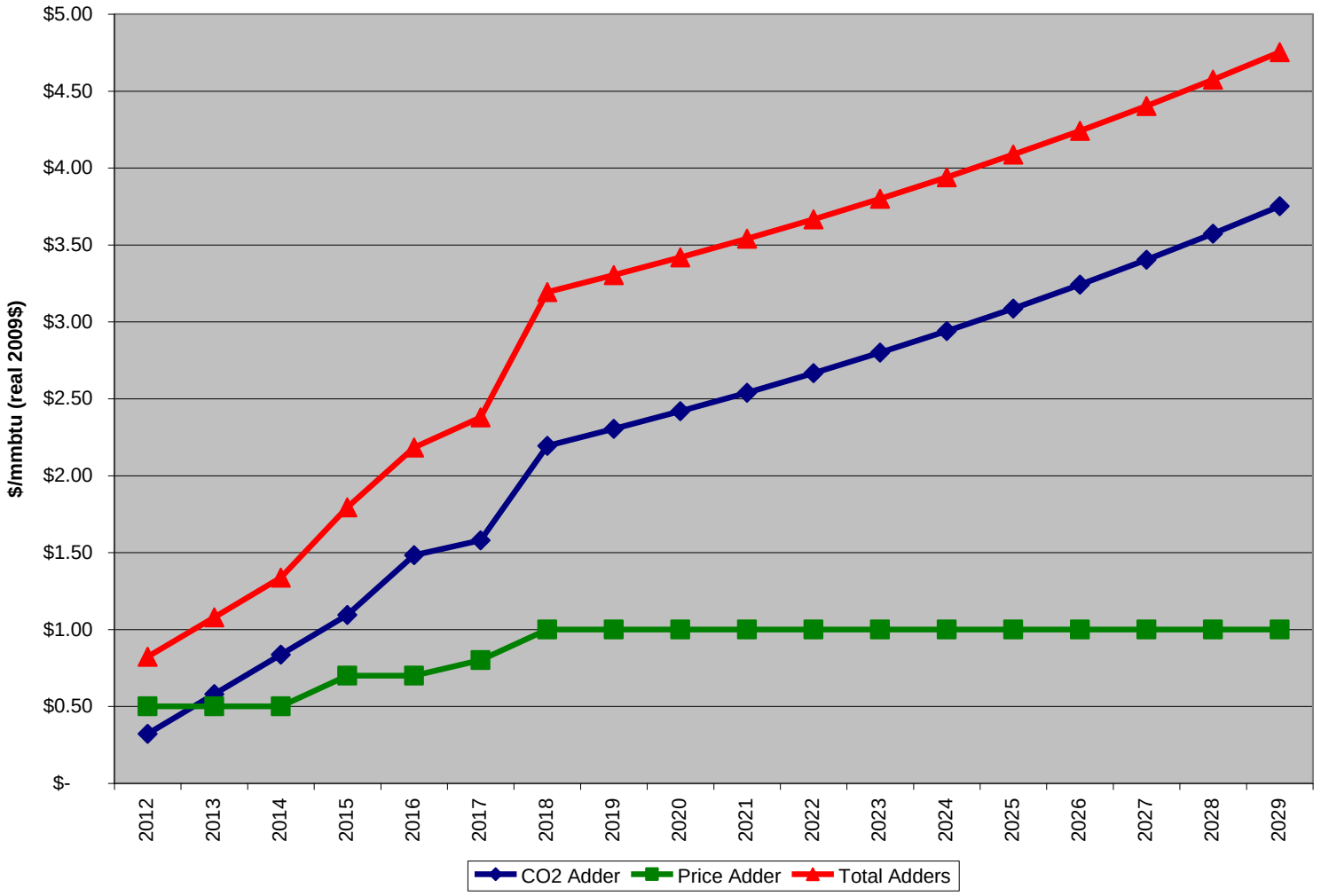


Price Elasticity Proposed Assumptions

	Real Price annual increase within 30%	Real Price annual increase exceeds 30%
High	Negative .20	Negative .30
Expected	Negative .13	Negative .13
Low	No response	Negative .06

Carbon Mitigation Cost Adders

Expected Carbon Case ($/mmbtu)



SENDOUT® Overview & Cases

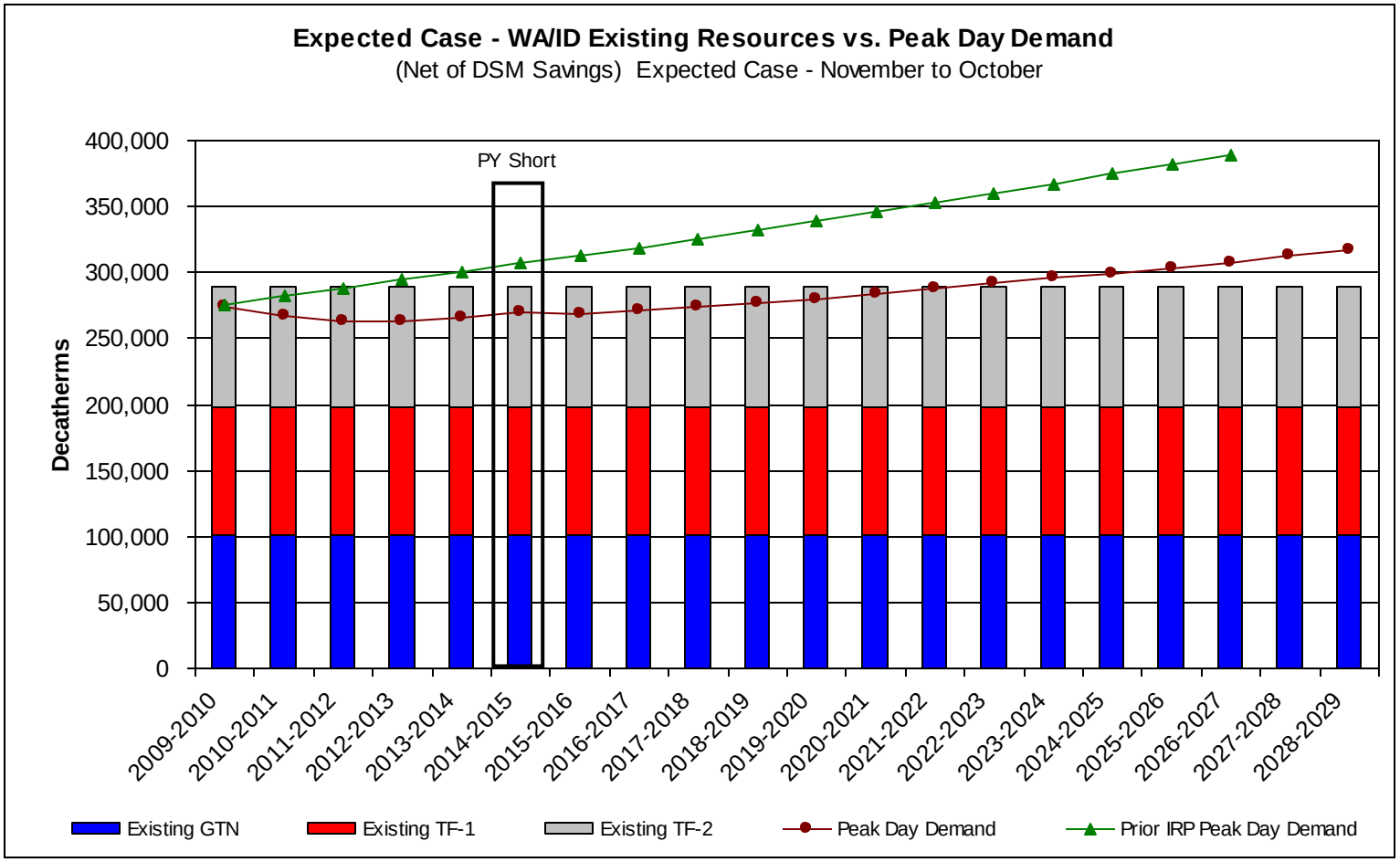
Agenda

- SENDOUT® System Overview
- Cases
  - Demand Growth and Unserved Demand
  - Resource Options for Meeting Unserved Demand

SENDOUT® Cases

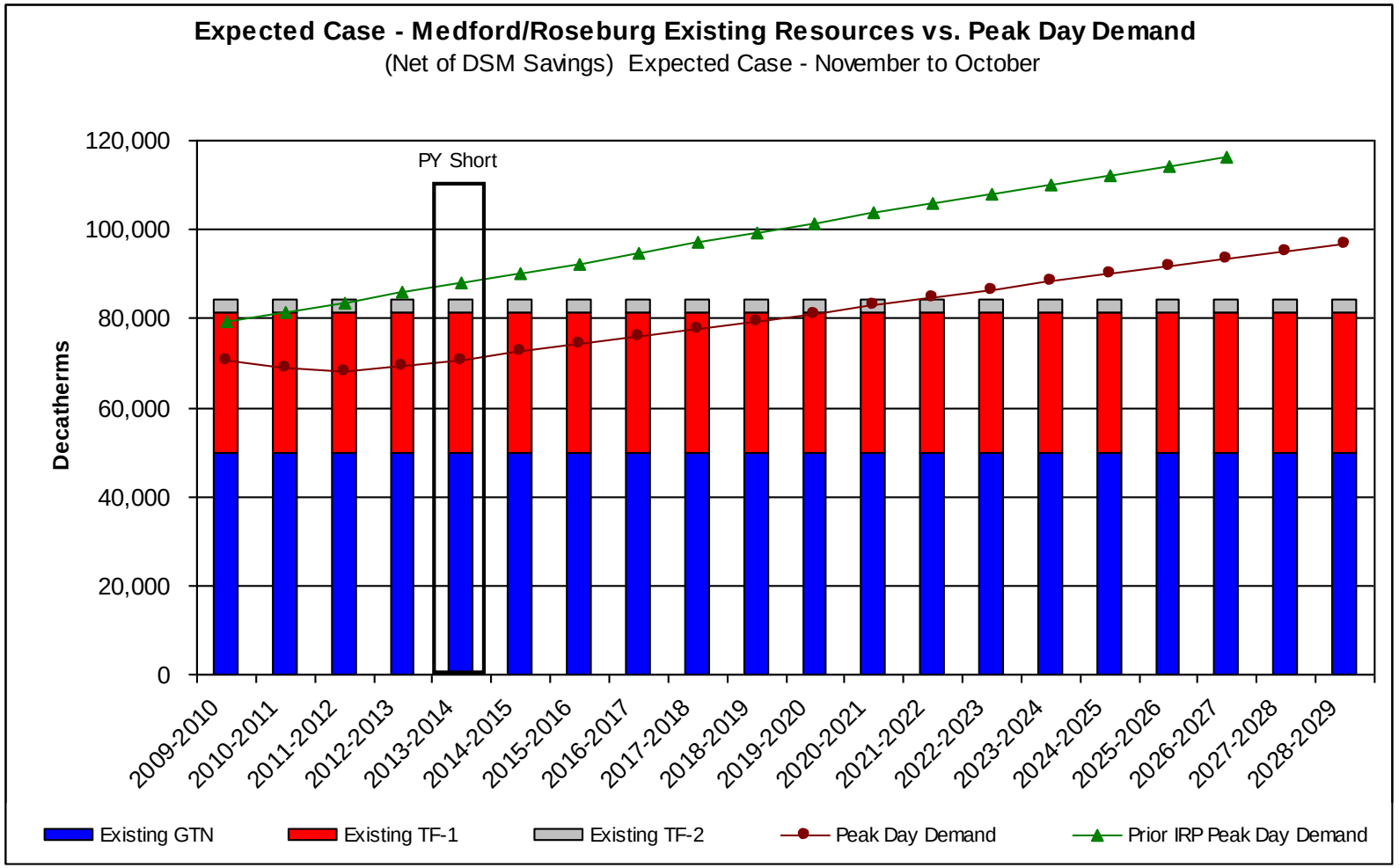
Existing Resources vs. Peak Day Demand

Expected Case – WA/ID (DRAFT)



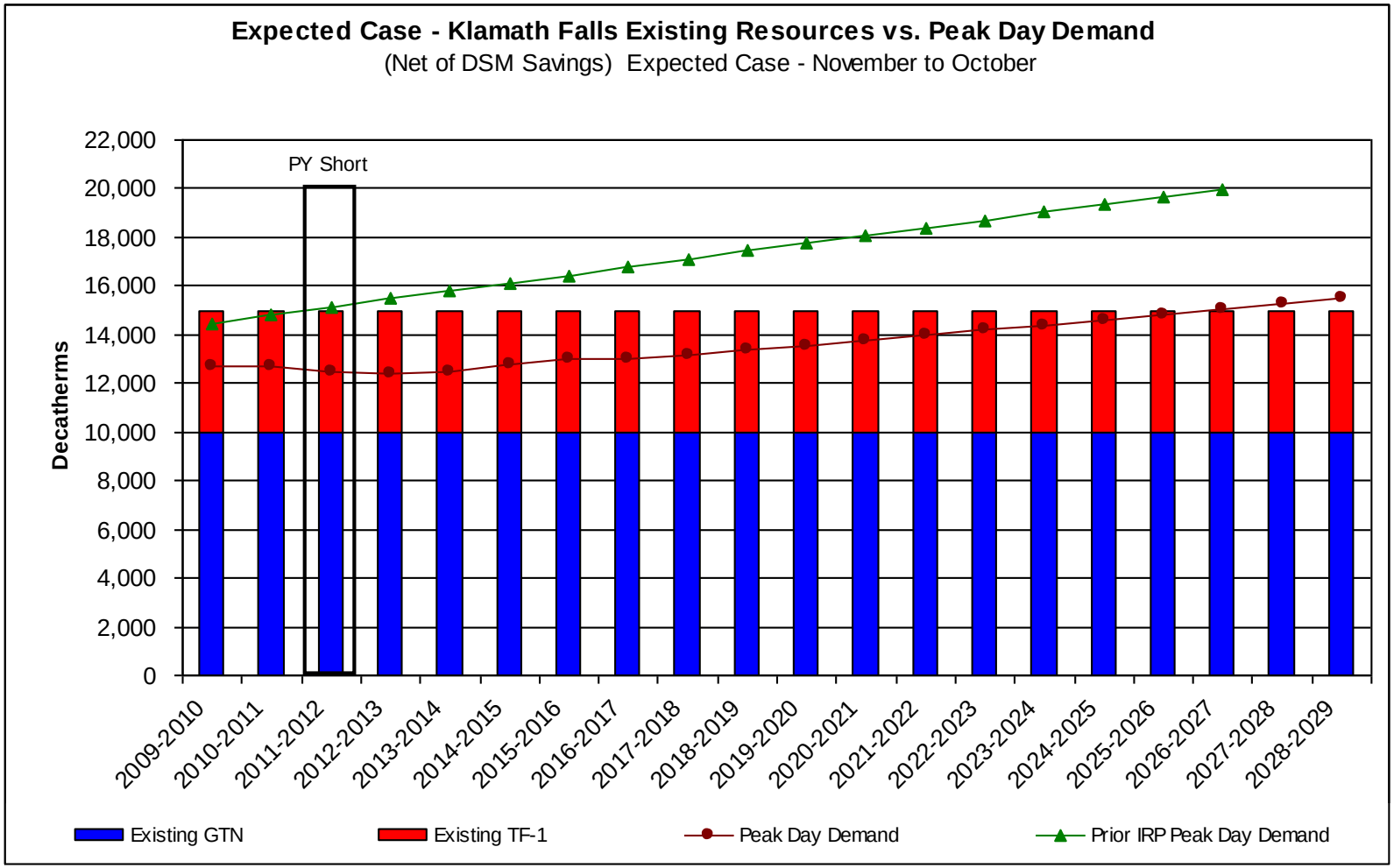
Existing Resources vs. Peak Day Demand

Expected Case – Medford/Roseburg (DRAFT)



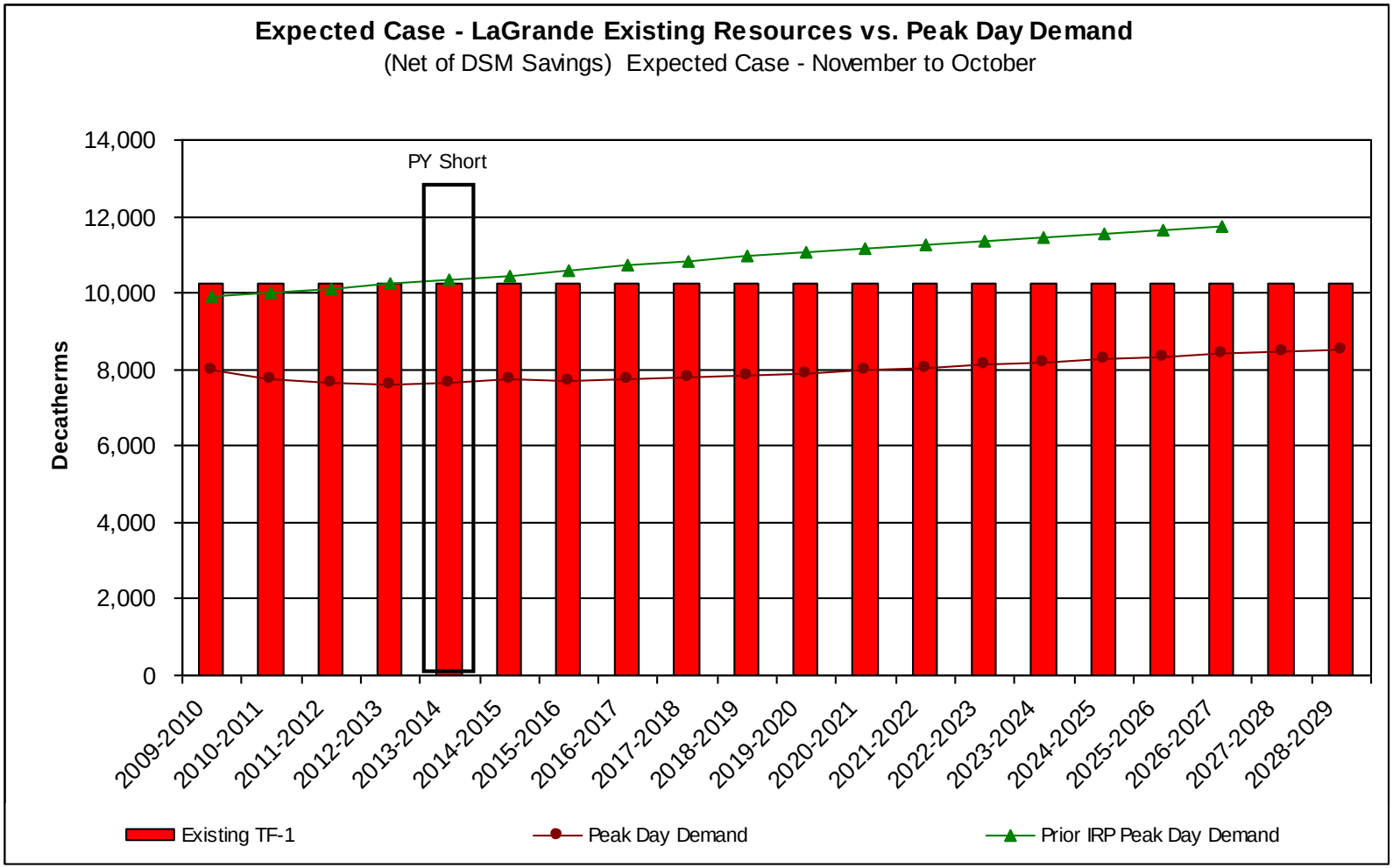
Existing Resources vs. Peak Day Demand

Expected Case – Klamath Falls (DRAFT)



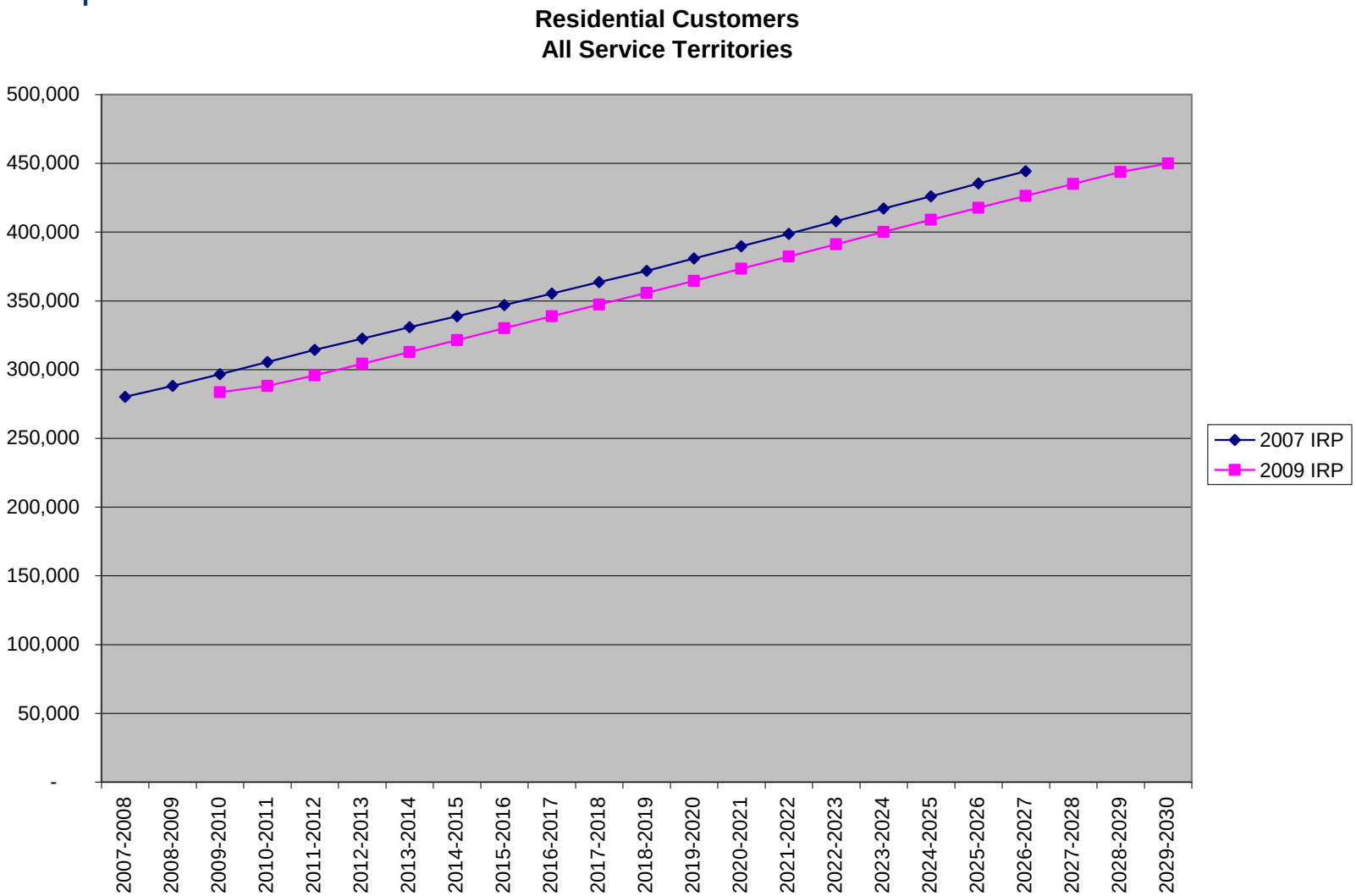
Existing Resources vs. Peak Day Demand

Expected Case – La Grande (DRAFT)



Forecast Comparison – Number of Customers

Expected Case

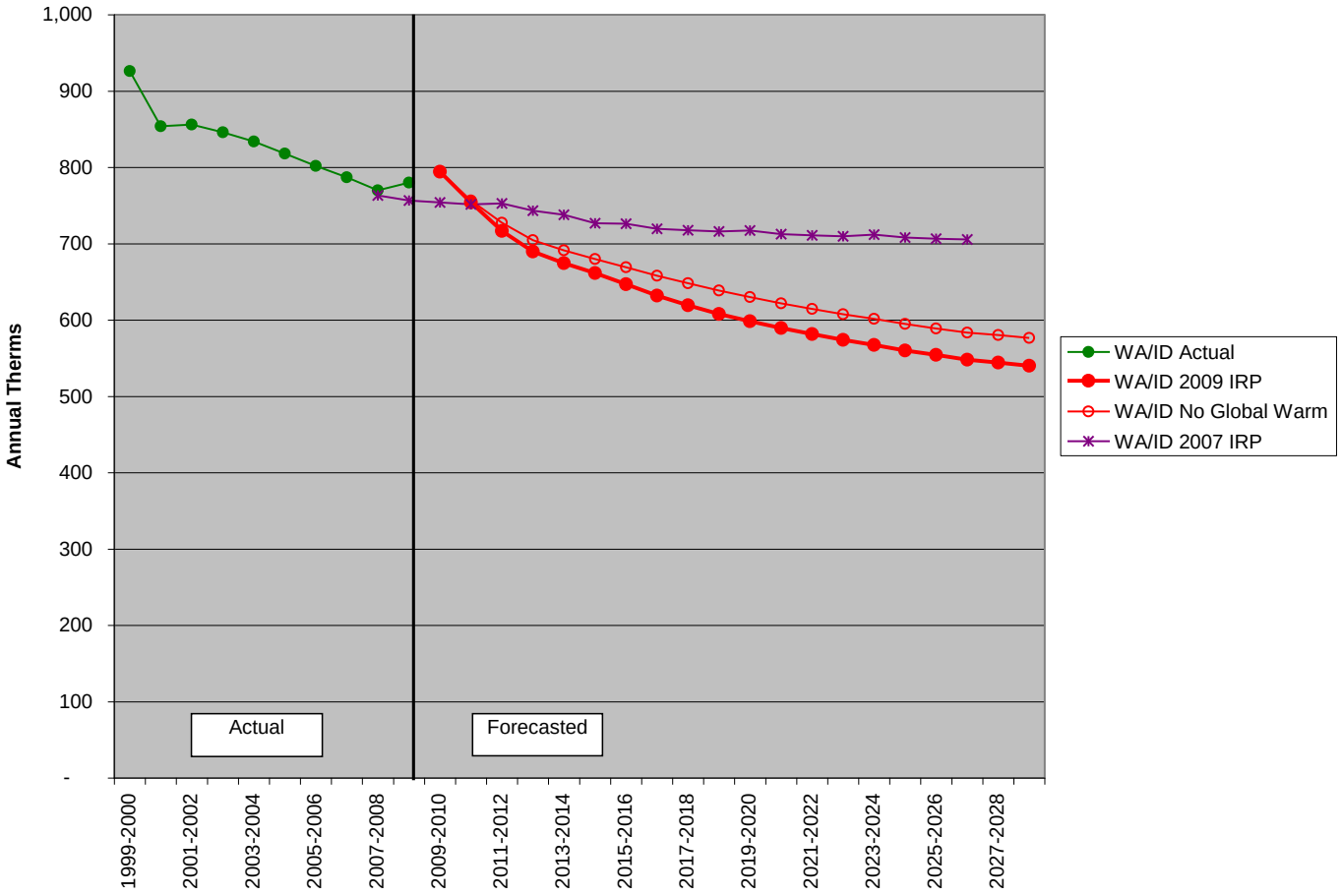


Forecast Comparison – Number of Customers

Expected Case

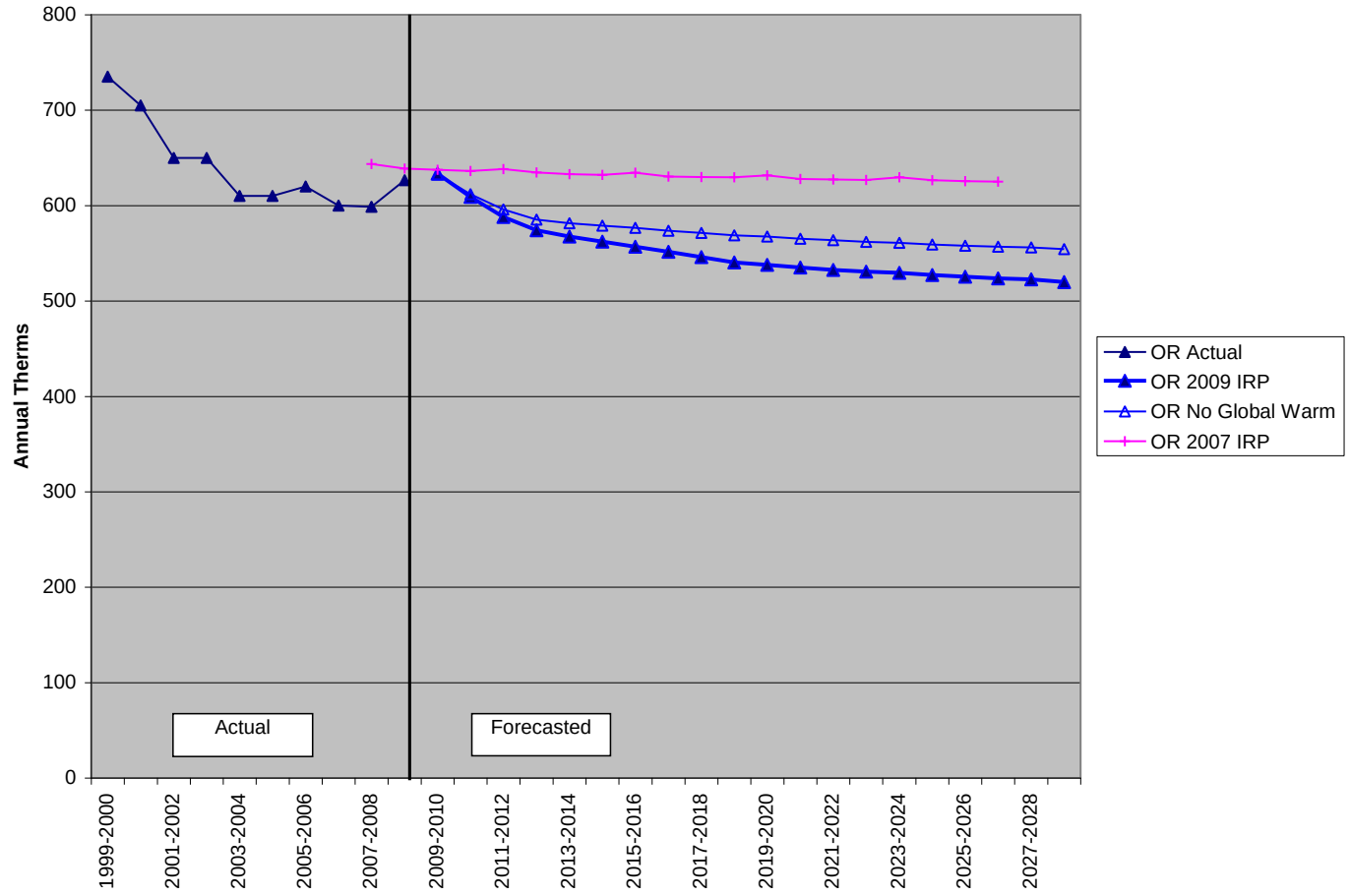
Forecast Comparison - Annual Use Per Customer

Expected Case WA/ID Residential (Weather Normalized)



Forecast Comparison - Annual Use Per Customer

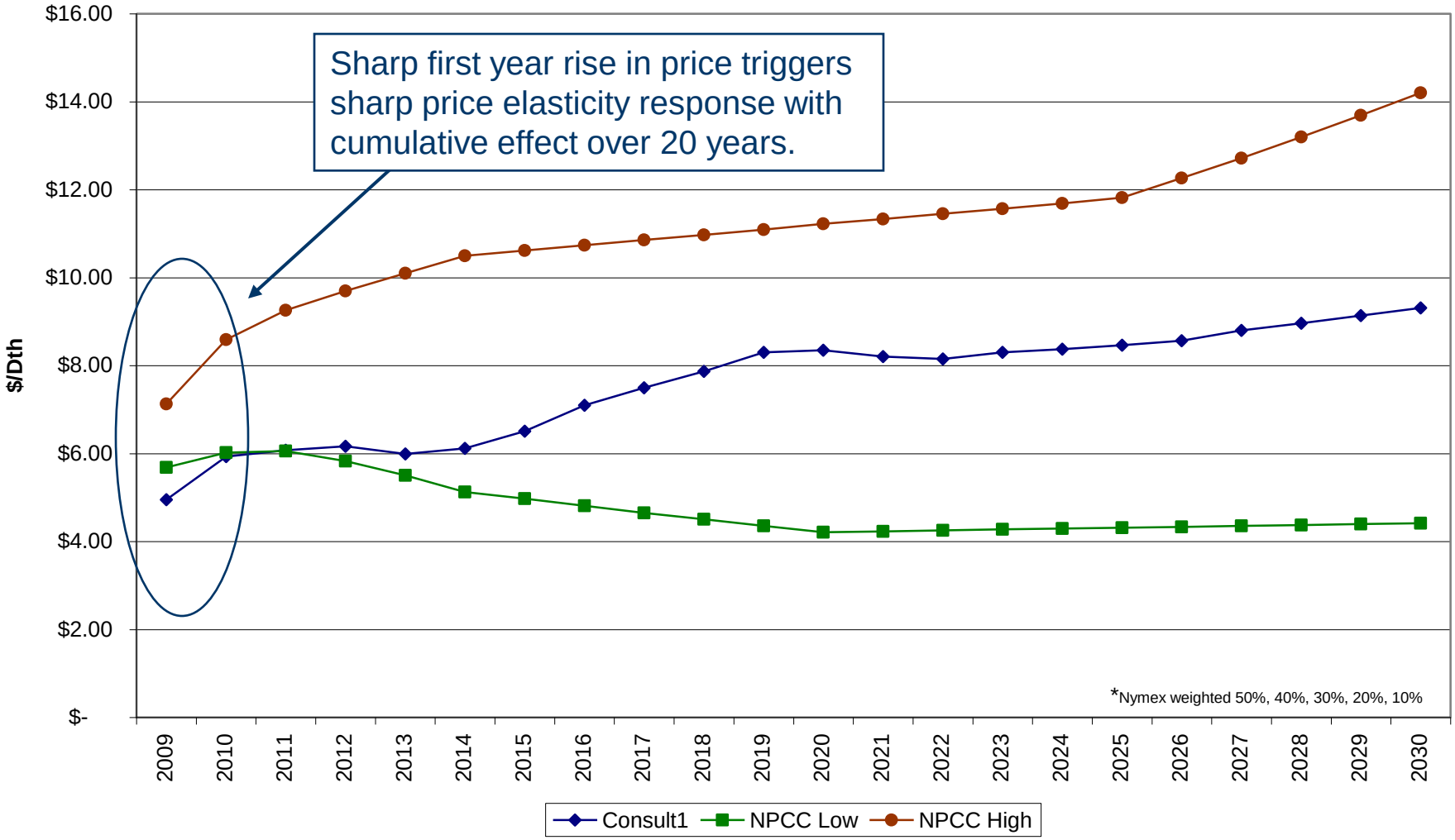
Expected Case Oregon Residential (Weather Normalized)



Henry Hub Price Forecasts for IRP

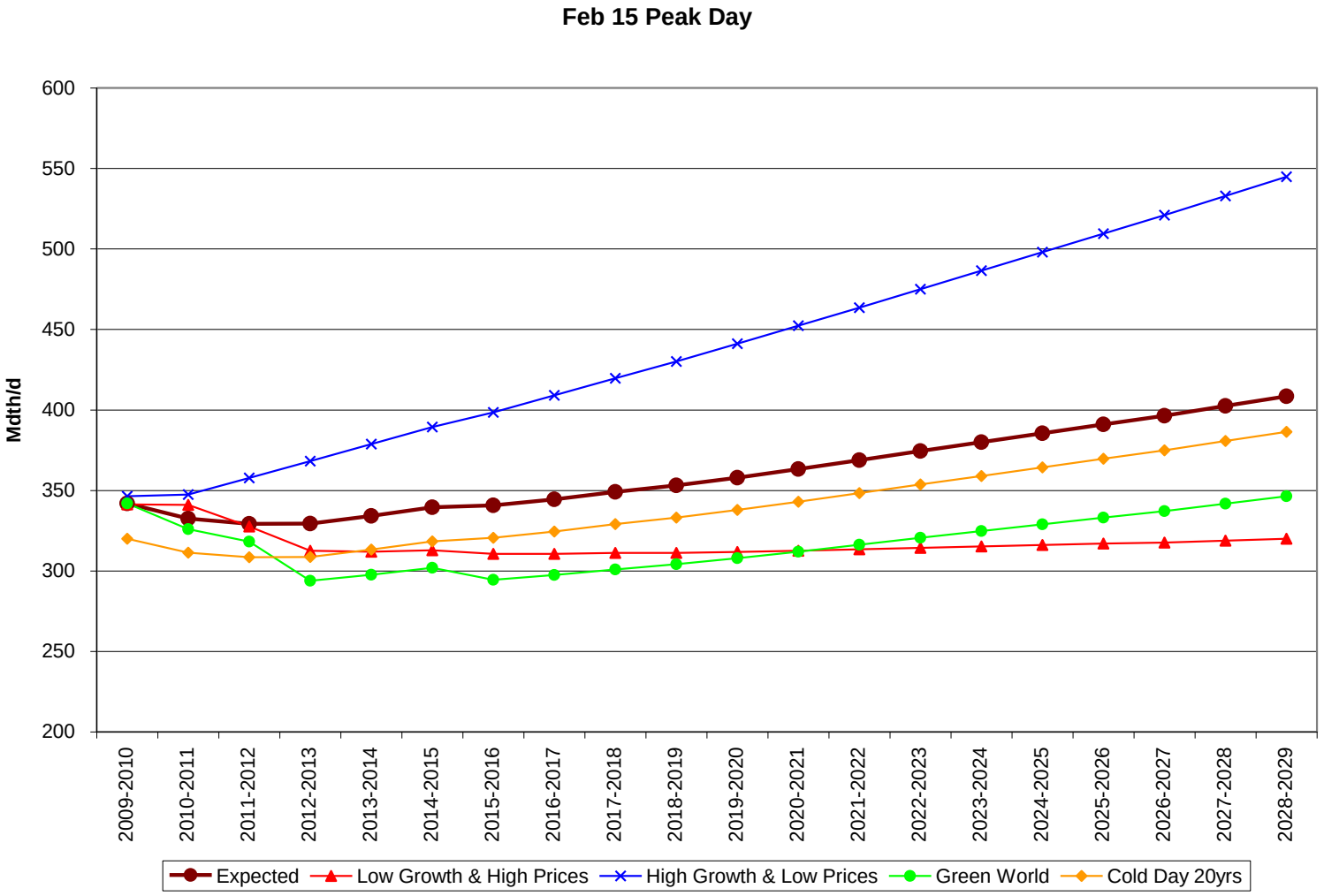
Nymex blend first five years*

2009$/Dth



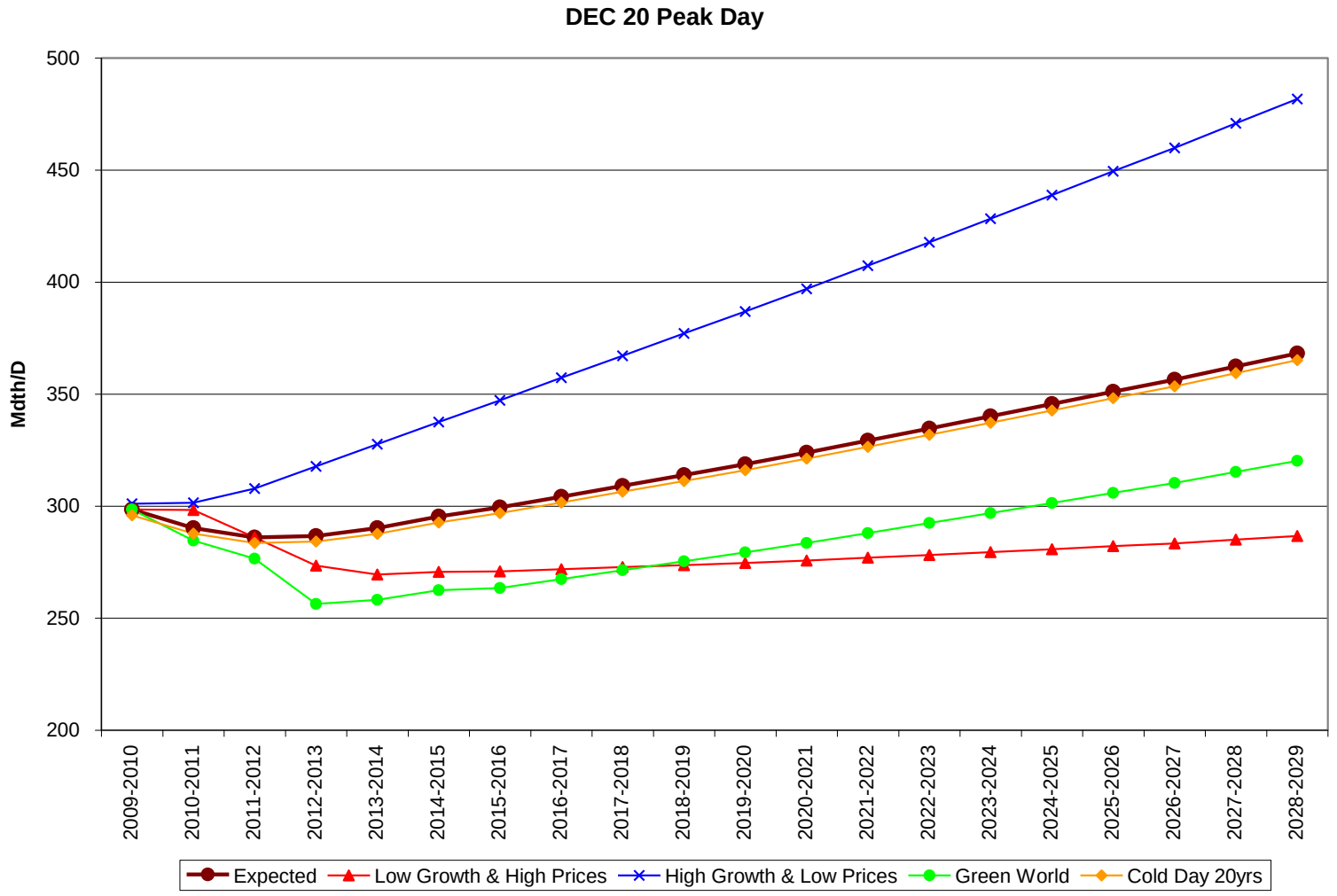
Peak Day Demand

Scenario Comparisons FEB 15 – DRAFT



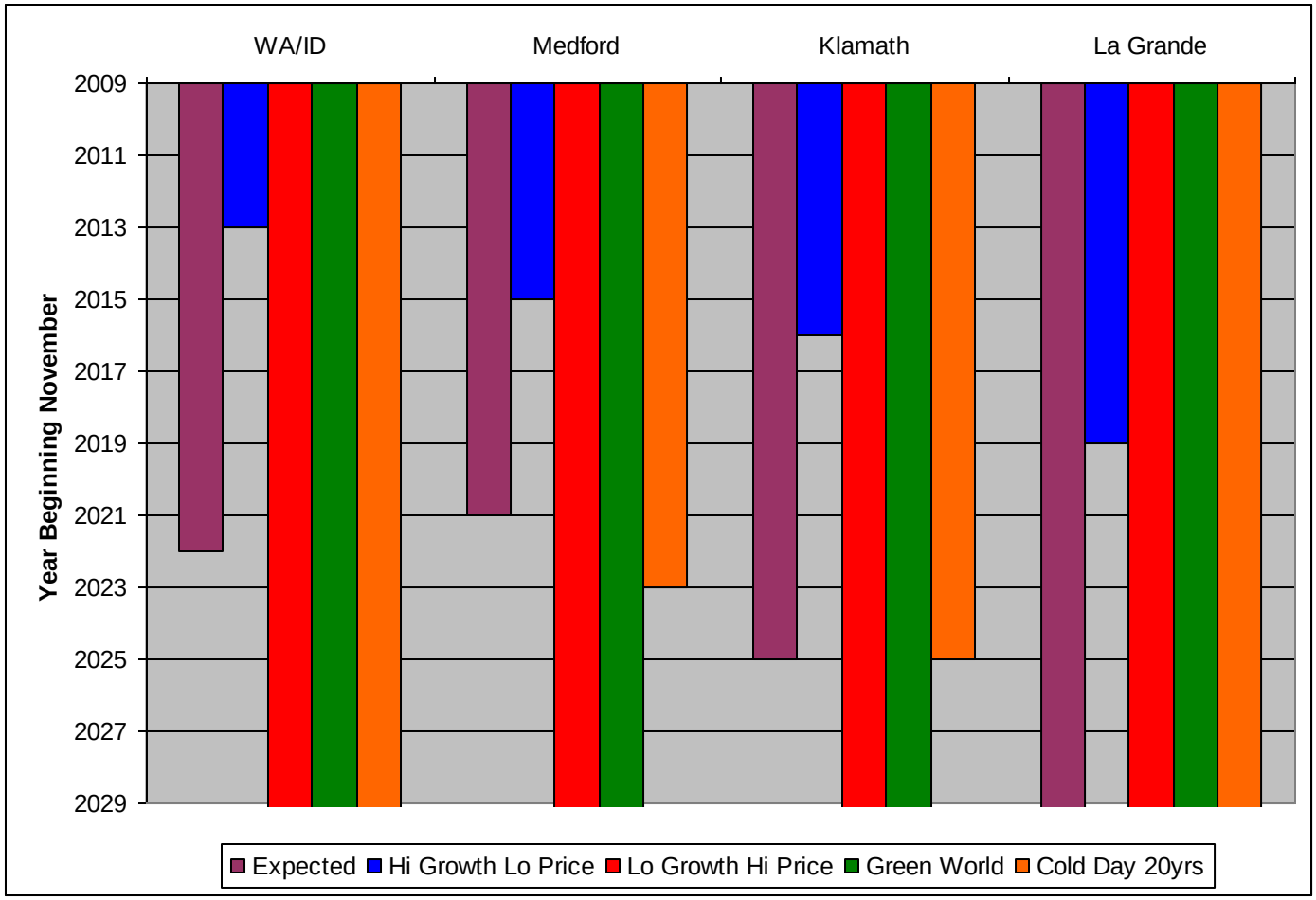
Peak Day Demand

Scenario Comparisons DEC 20 – DRAFT



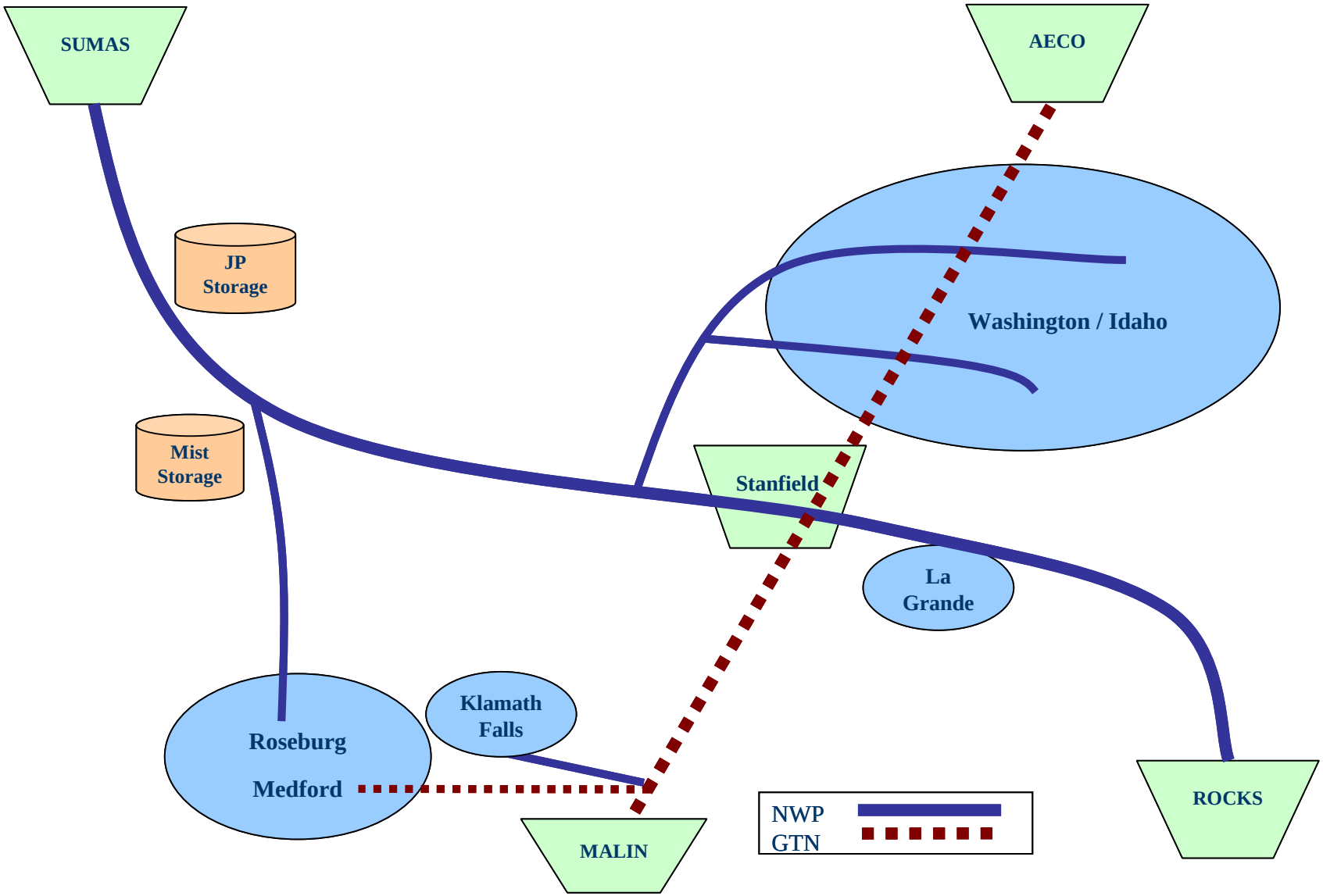
Year First Unserved

Scenario Comparisons - DRAFT



Resource Options for Meeting Unserved Demand

Existing Supply Resources



New Resource Considerations

- Resource Cost
- Peak versus Base Load
- Lead-Time Requirements
- Resource Usefulness
- “Lumpiness” of Resource Options
- Execution
- Risk

Options to be Reviewed

- DSM
- Backhauls
- Exchange Agreements
- Avista System Enhancements
- Storage
- Pipeline Transportation
- Satellite LNG
- Company Owned LNG
- Large-Scale LNG

Demand Side Management

Agenda

- Overview
- Methodology
- DSM Sensitivities
- Demand Response
- Environmental Externalities

Overview

Acquiring demand-side resources is the best strategy for minimizing costs while promoting a cleaner environment.

- Because conservation consumes no fuel and produces no emissions, it continues to be an attractive resource alternative.

- Reducing natural gas consumption defers the need for additional supply resources or distribution system enhancements

Technical Potential >> Acquirable Potential >> SENDOUT® Testing >> Goal Establishment >> Results Monitoring

Methodology

1. Identifying Technical Potential
    - Measure Identification
2. Assessing Acquirable Potential
    - Preliminary evaluation
3. SENDOUT® Testing
    - Determining Avoided Cost
    - Selecting least cost resources
4. Conservation Goal Development
    - Add site specific Acquirable Potential
    - Develop Implementation Plan
5. Results Monitoring

1. Technical Potential – Measure Identification

Avista contracted with RLW to analyze the potential energy savings in its OR service territory and allocated to modeled service territories

- Estimated all energy savings without consideration of market constraints >> “Technical Potential” (e.g. every natural gas water heater in the service territory)
- RLW’s Technical Potential – ROB and new construction (e.g. only burn outs will be replaced + new construction)
- Adjustments and Updates
- Use RLW study and extrapolated to Washington/Idaho based on customers/throughput

Example Types of Conservation Measures

Base load

- Higher efficiency water heaters
- Higher efficiency cooking equipment
- Front load or higher efficiency h-axis clothes washers

Heat sensitive

- Higher efficiency furnaces
- Duct work improvements (tighter sealing to reduce leaks)
- Ventilation heat recovery systems (capturing “chimney” heat)
- Ceiling/wall/floor insulation & weather stripping
- Insulated windows

2. Acquirable Potential - Preliminary Evaluation

- Start with number of customers by jurisdiction and segment
  - Assume 85% single family, 10% multi-family, 5% manufactured home
- Engineers and program managers evaluate measure costs, lives, energy savings for reasonableness
- Determine levelized cost and stack resources
- Used “Sub-TRC” costs – utility resource costs excluded

Cost Effectiveness Evaluation - A Closer Look

Is the present value of the therm savings > cost to achieve savings?

- Capturing all benefits
  - Non energy benefits
  - Environmental externalities (e.g. 10% adder to OR avoided costs on top of other considerations such as risk)
- Capturing all costs
  - Incremental measure cost
  - Incremental administrative cost

Cost Effectiveness Evaluation - A Closer Look (cont.)

- Exceptions
  - Market transformation efforts >> 1x shot to influence market (price point) with exit strategy
  - Mandated
  - Bundling measures in some cases

3. SENDOUT® Testing - Avoided Cost & Resource Mix

- Cost and therm savings for each measure or group of measures entered into SENDOUT
- Avoided cost determined by comparison to the marginal supply side resources to meet incremental demand
- If demand side measure savings, when valued at the avoided cost of the marginal supply side resource, is less than the supply resource, the measure is selected and demand is reduced accordingly

4. Conservation Goal Development

Adjustments to SENDOUT® Results

- Assessing and adding site specific therm savings
- Market transformation measures
- Program bundling
- Implementation infrastructure considerations
  - Employees and contractors
  - Incentive revisions

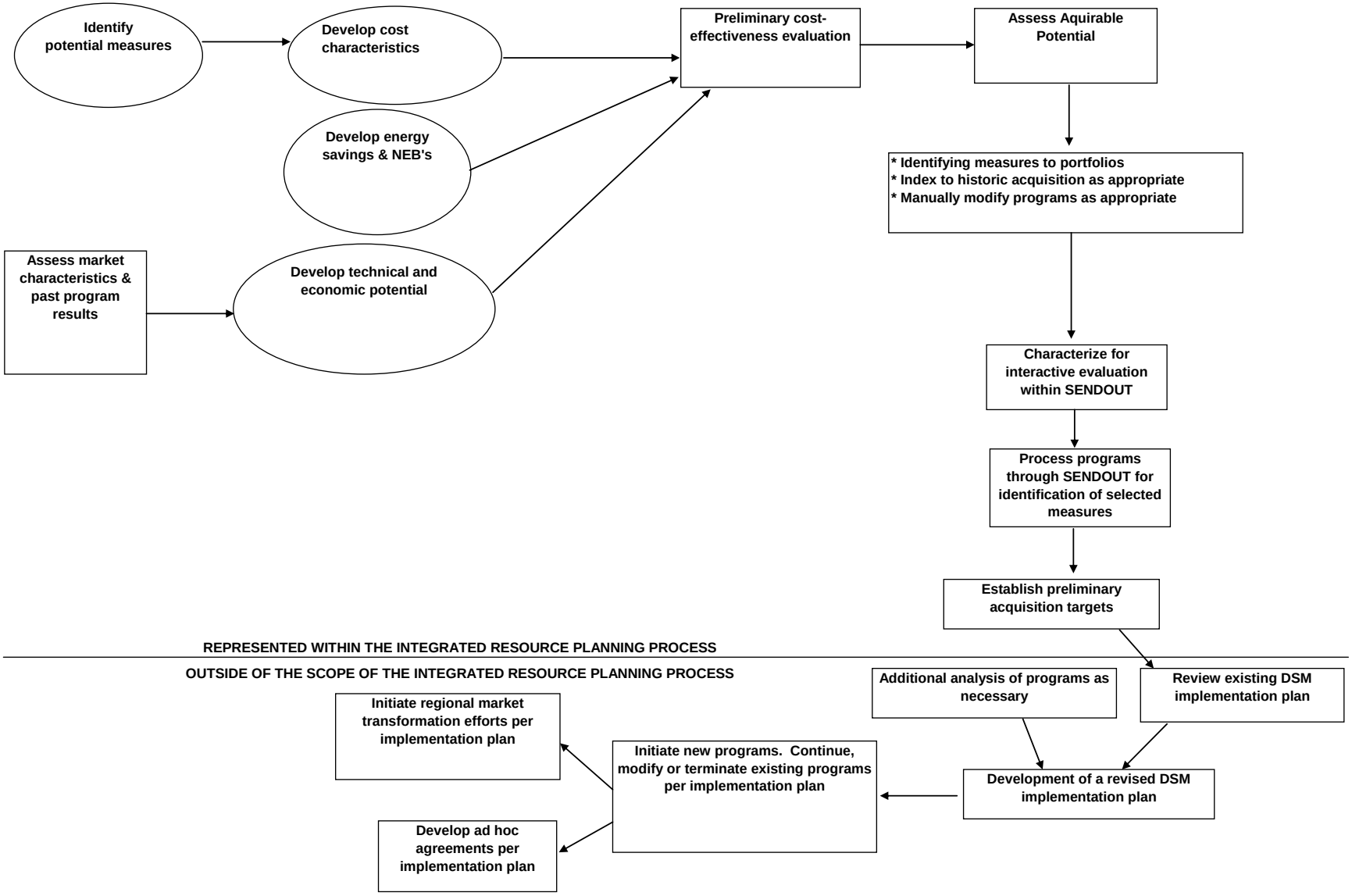
The Post-IRP Implementation Planning Process

- Review of infrastructure capabilities
- Revise target markets and measures
- Review residential and non-residential prescriptive programs
  - Addition or deletion of measures
  - Reevaluate engineering analysis annually (incremental costs, savings, etc)
  - Revise incentives, if necessary, based on update engineering analysis
- Update Schedule 190 (DSM), if necessary, for cost-effective measures which may be outside the scope of our current Schedule 190 tariff authority

5. Results Monitoring

- Semi-annual Triple E meetings with stakeholders
- Monthly, quarterly email updates
  - Actual to budget results
  - Tariff rider balances and projections
- Annual review of engineering analysis
- Evaluation of new measures and technologies using updated avoided costs resulting from the IRP process

Integration of DSM within the 2009 Gas IRP



DSM Sensitivities

Demand-side resources may be affected by uncertain economic conditions. We evaluated two Sensitivities based on the following perspectives:

DSM Accelerated:

Tax credits, particularly on the residential side, induce a combination of increasing participation in our programs to some degree, but the greatest impact is in inducing participating residential customers to stretch to higher levels of efficiency in order to qualify for tax credits as a complement to our existing rebates. Non-residential customers have far fewer such tax credits available to them, but to a much lesser degree the same impact occurs in that market. Stimulus funded residential audit programs result in the acquisition of low-cost / no-cost measures beyond what was assumed in the IRP base case.

DSM Sensitivities (cont.)

DSM Delayed:

Budget constraints restrict customer incentives to less than current levels. Our program outreach is cut by 50% and we are unable to add additional staff beyond our existing complement. The economic recession continues and due to reduced disposable income, we see a reduction in non-lost-opportunity (deferrable) efficiency measures such as weatherization and a lesser reduction in the installation of lost-opportunity (furnace, hot water heater etc) measures. We also see a reduction in non-residential energy-efficiency measures due to the lack of discretionary capital budget within our customers businesses.

DSM Sensitivities – Summary of Therm Changes

	DSM Accelerated		DSM Delayed	
	2010 Therms	Cumulative Therms over 20 Years	2010 Therms	Cumulative Therms over 20 Years
Annual Measures				
Medford	3,666	65,985	(444)	(7,986)
Roseburg	843	15,173	(102)	(1,837)
Klamath	1,539	27,697	(186)	(3,353)
LaGrande	642	11,560	(78)	(1,400)
WA/ID	56,311	1,013,598	(32,584)	(586,512)
Winter Measures				
Medford	16,330	293,944	-	-
Roseburg	3,755	67,586	-	-
Klamath	6,854	123,372	-	-
LaGrande	2,861	51,494	-	-
WA/ID	233,720	4,206,960	(125,057)	(2,251,026)

Demand Response

Adjust timing of energy consumption away from consumption peaks

- Common strategies:
  - Price response strategies
    - Seasonal rates (summer vs winter)
  - Demand curtailment strategies
    - Interruptible rates & consumption controls to physically manage/restrict gas flow
- Currently, these strategies most effective for high consumption customers e.g. industrial & large commercial accounts
  - Not a significant portion of our customer base

Environmental Externalities

- Carbon Mitigation
  - Regional program > Western Climate initiative
    - LDCs subject to allowances 2015
  - Federal program > Waxman - Markey
    - LDCs subject to allowances in 2016
  - Significant uncertainty around ultimate program

- Oregon UM556 / UM1056
  - 10% cost advantage DSM
  - Newly revised Guideline #8

Questions ?

IRP Timeline

December 29, 2008 – Work Plan filed with WUTC

April through July 2009 – Technical Advisory Committee meetings. Meeting topics will include:

- **April 28** - Demand Forecast & Demand-Side Management
- **May 19** - Demand Forecast Follow up & Supply/Infrastructure
- **June 16** - DSM follow up & SENDOUT® Cases
- **July 16** - SENDOUT® results and VectorGas™ results

September 1, 2009 – Draft of IRP document to TAC

October 30, 2009 – Comments on draft due back to Avista

November 6, 2009 – TAC final review meeting (if necessary)

December 31, 2009 – File finalized IRP document