

Appendix K

Electrification Analysis

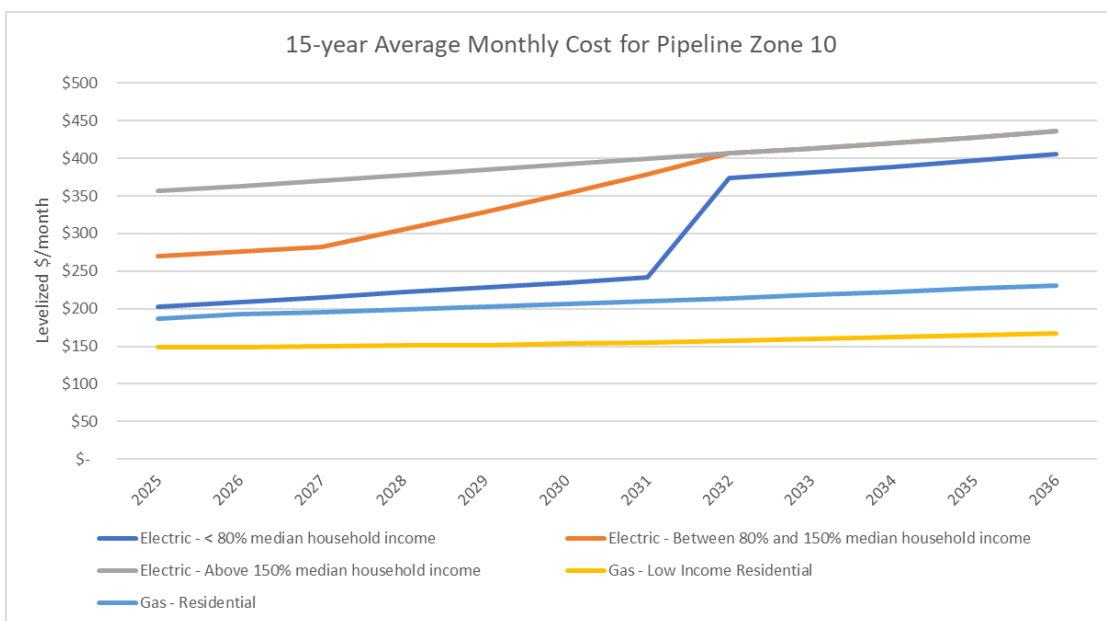
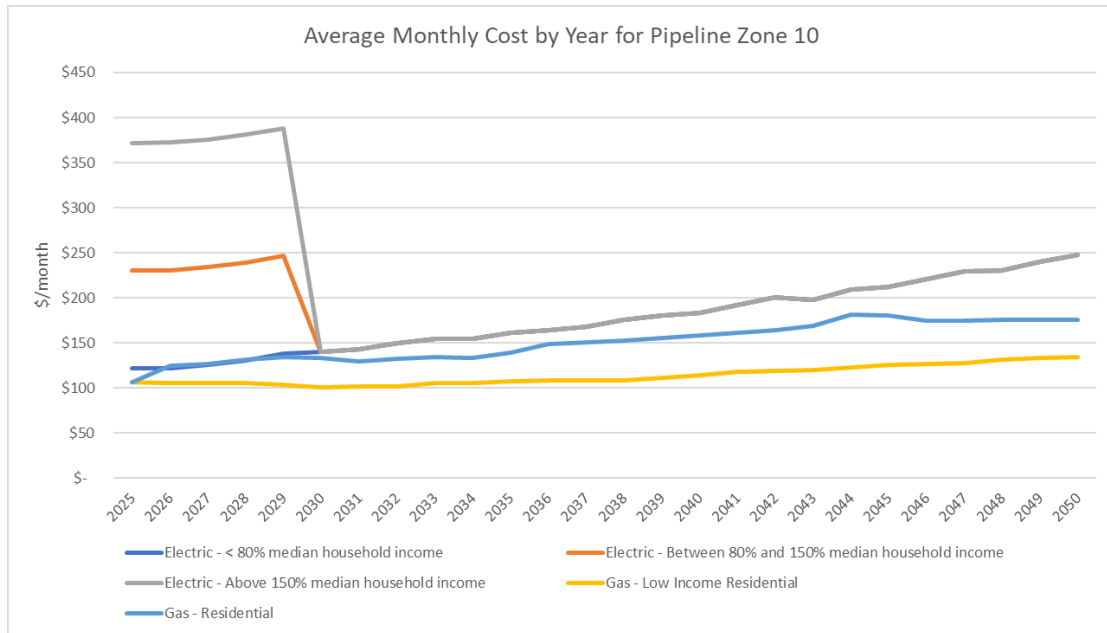
2025 WA IRP

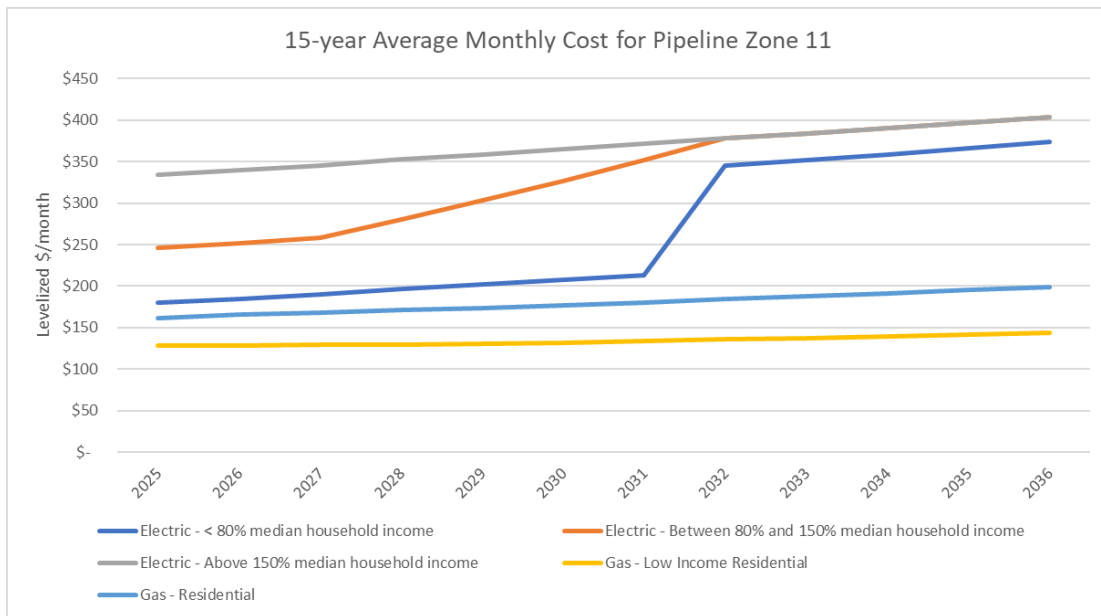
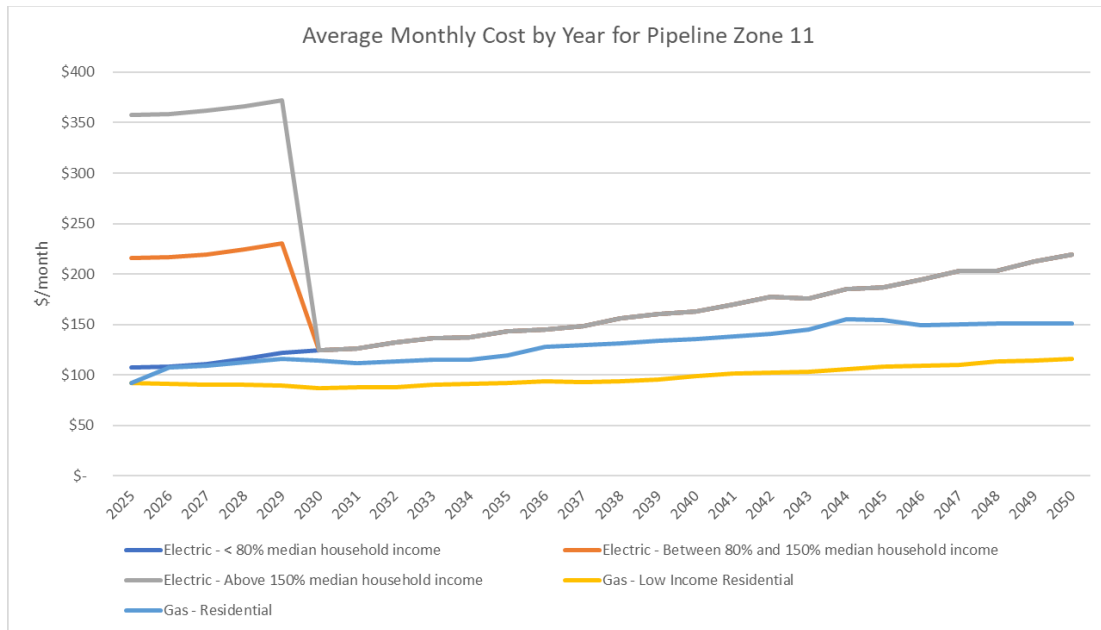
## **Appendix K – Introduction**

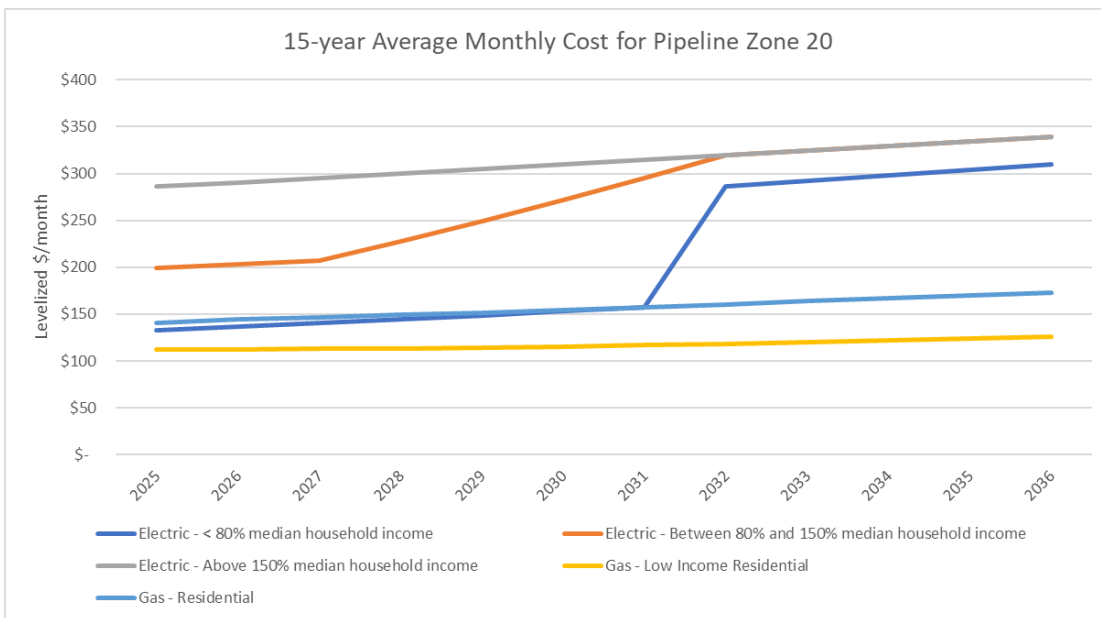
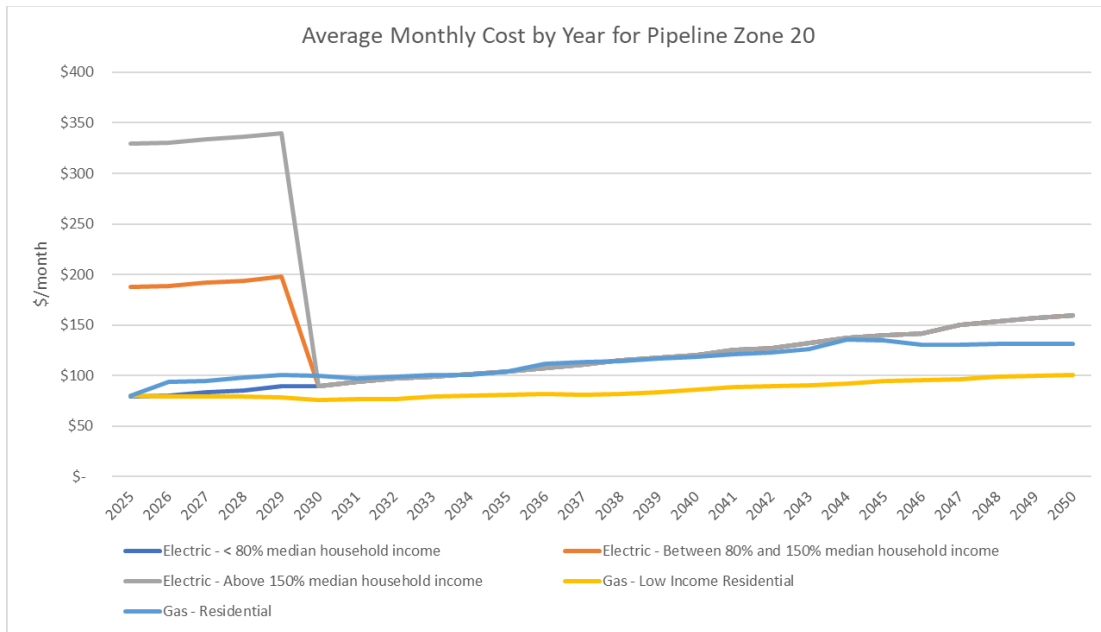
The purpose of this appendix is to provide electrification results by a combination of each pipeline zone and reference case, low growth, and high growth. Cascade has also provided the results from a Company perspective, or a utility cost test perspective, and a customer perspective. Under the customer perspective, Cascade included the marginal cost of a furnace, or in other terms, the cost difference between and heat pump and furnace as the install cost.

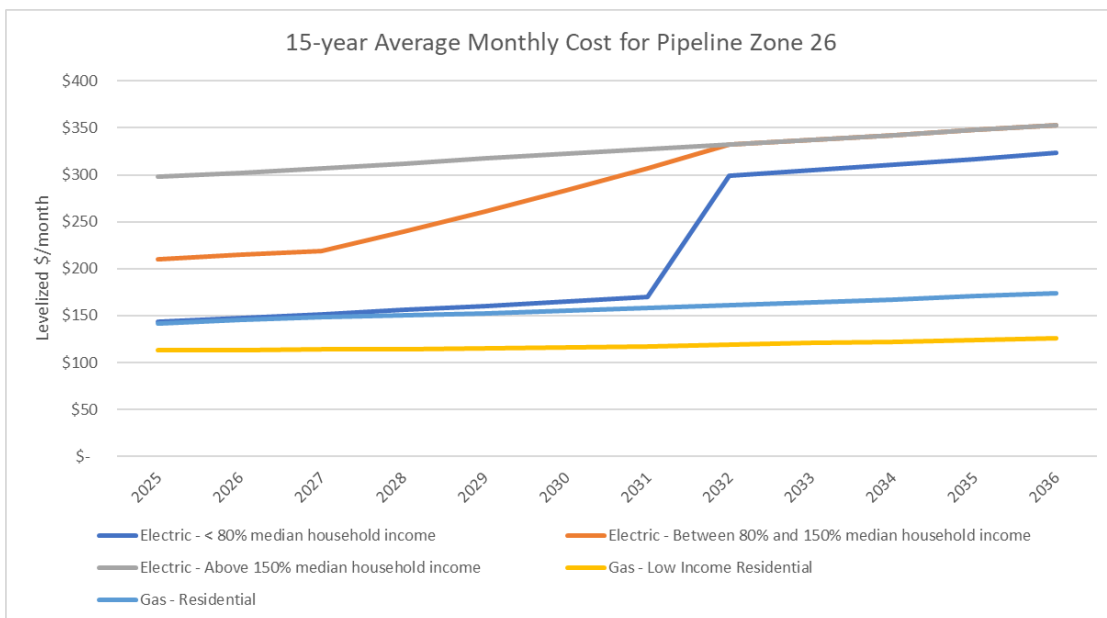
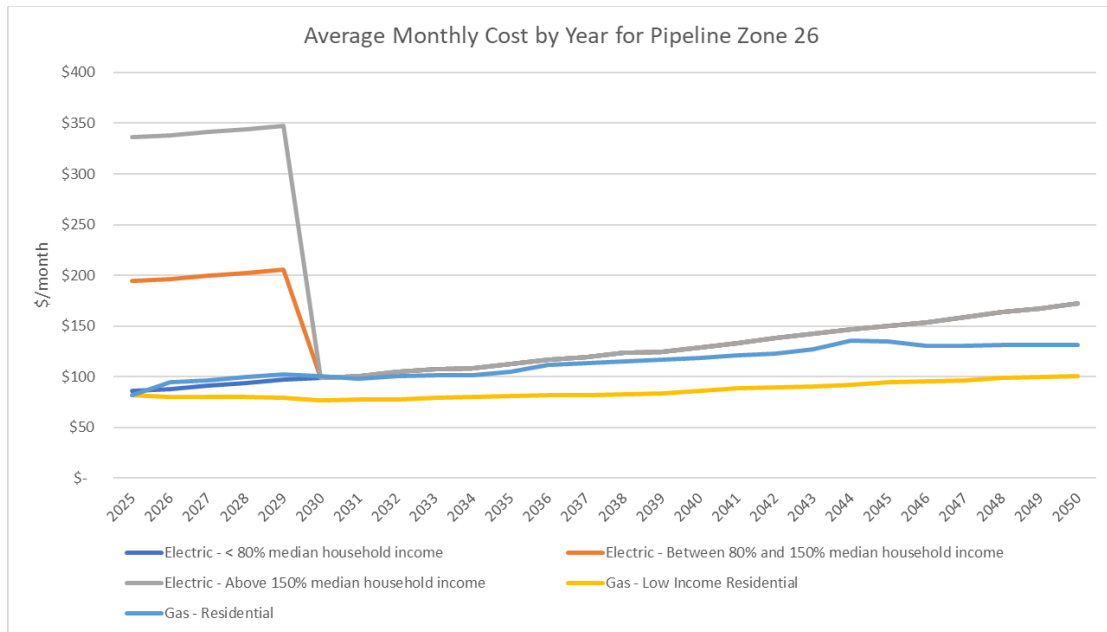
## Reference Case – Company Perspective (Furnace Cost Reduction Not Included)

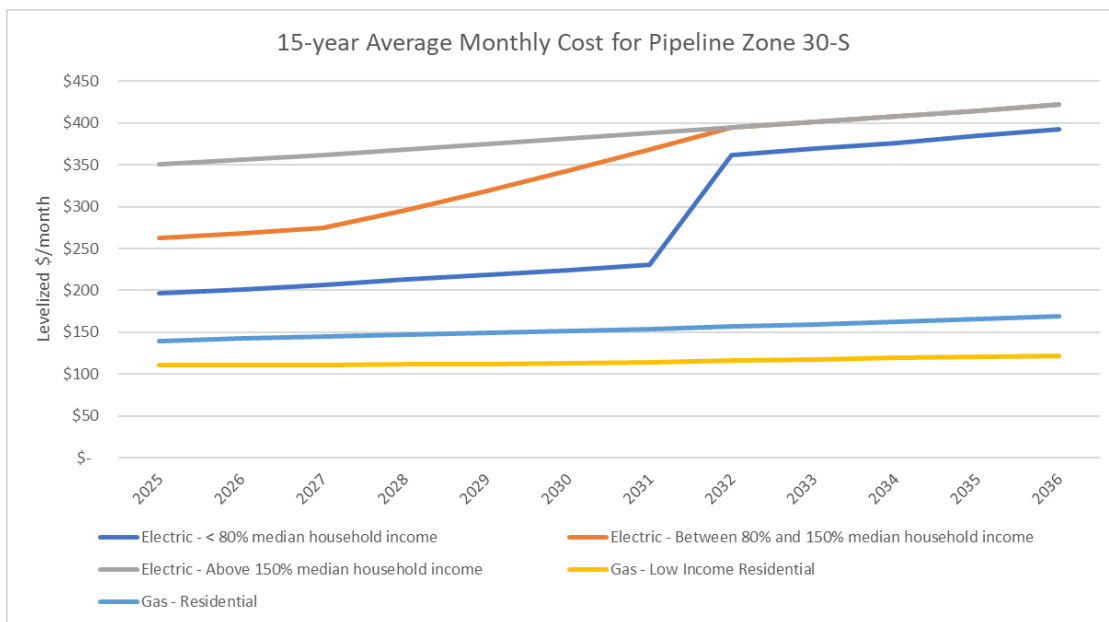
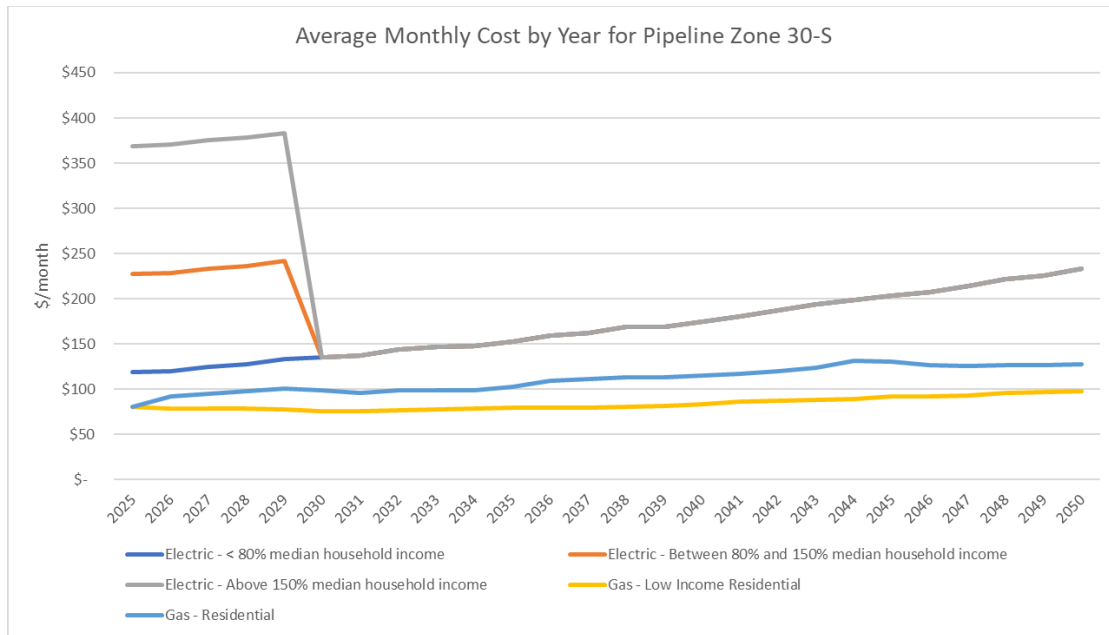
### Zone 10

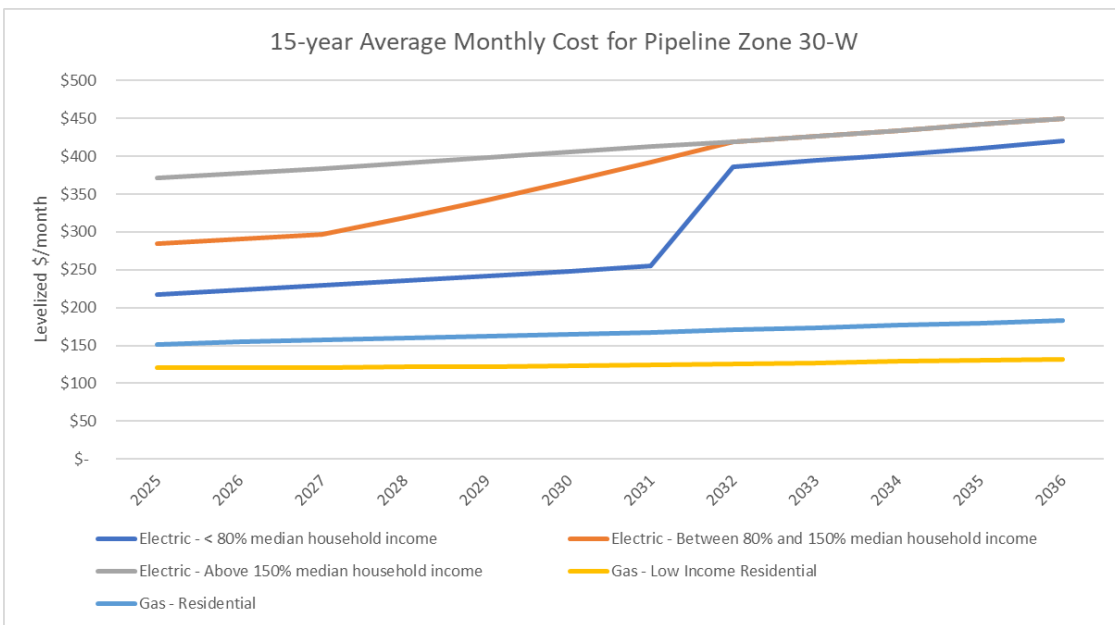
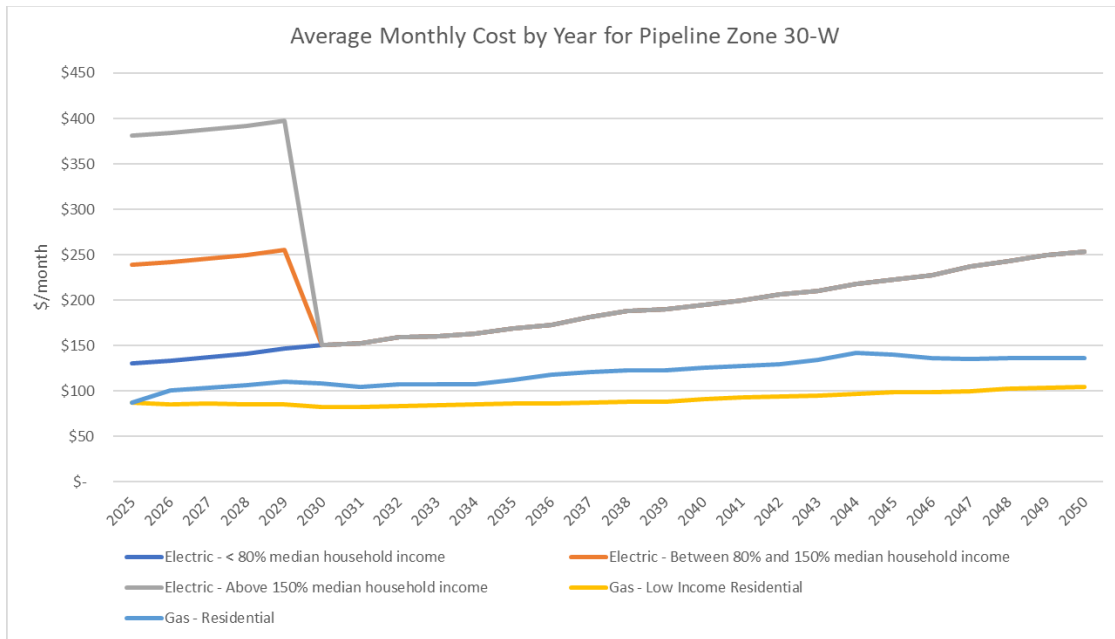


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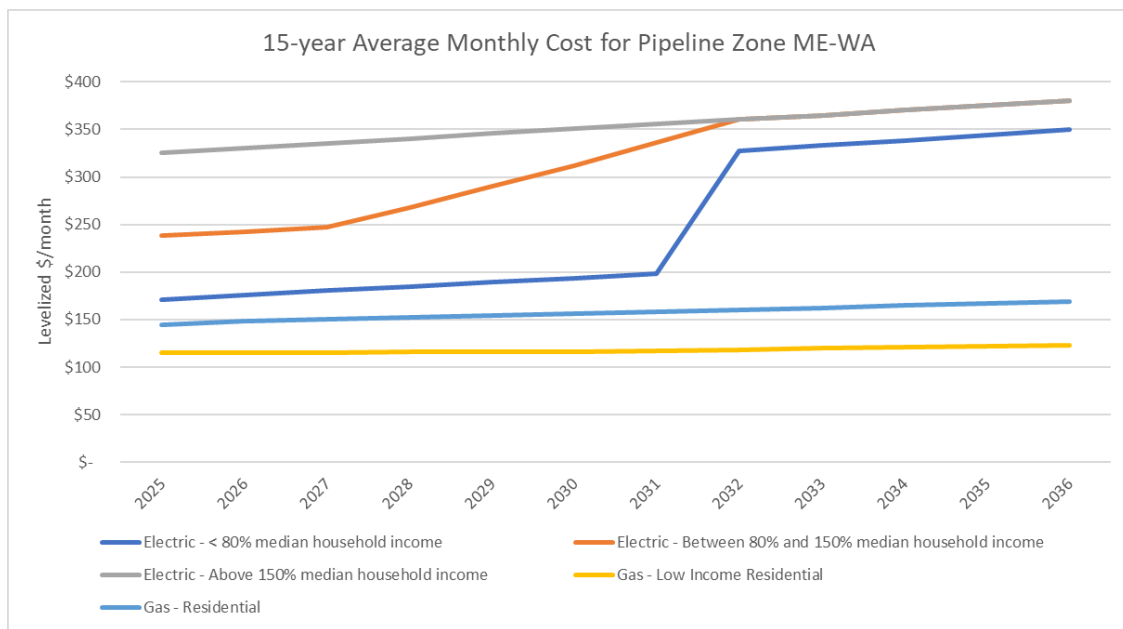
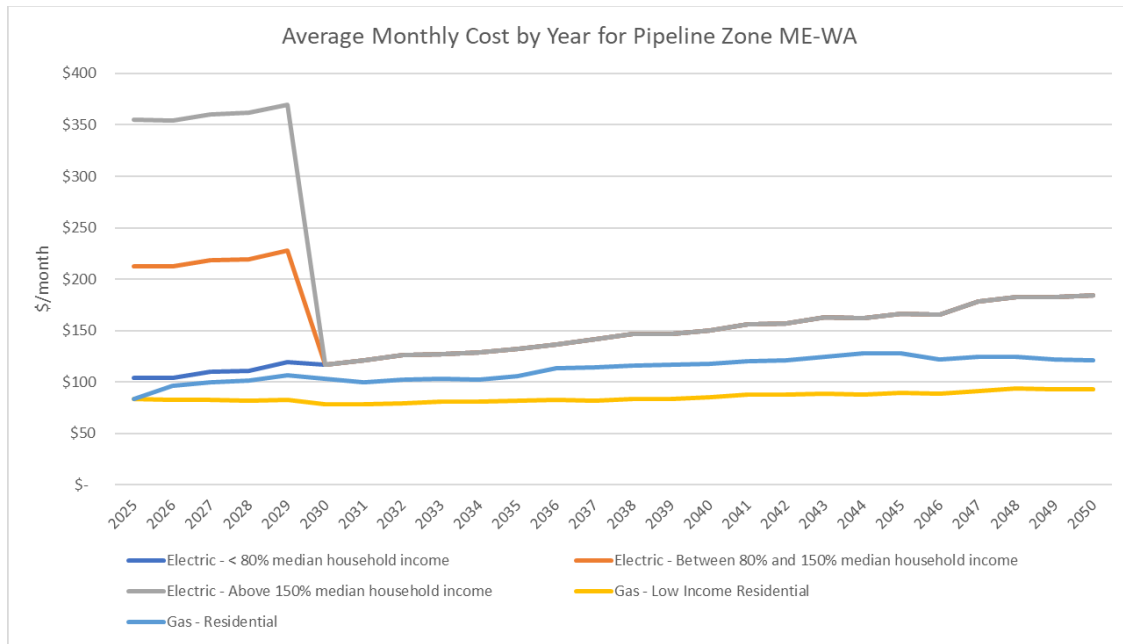
**Zone 20**

**Zone 26**

**Zone 30-S**

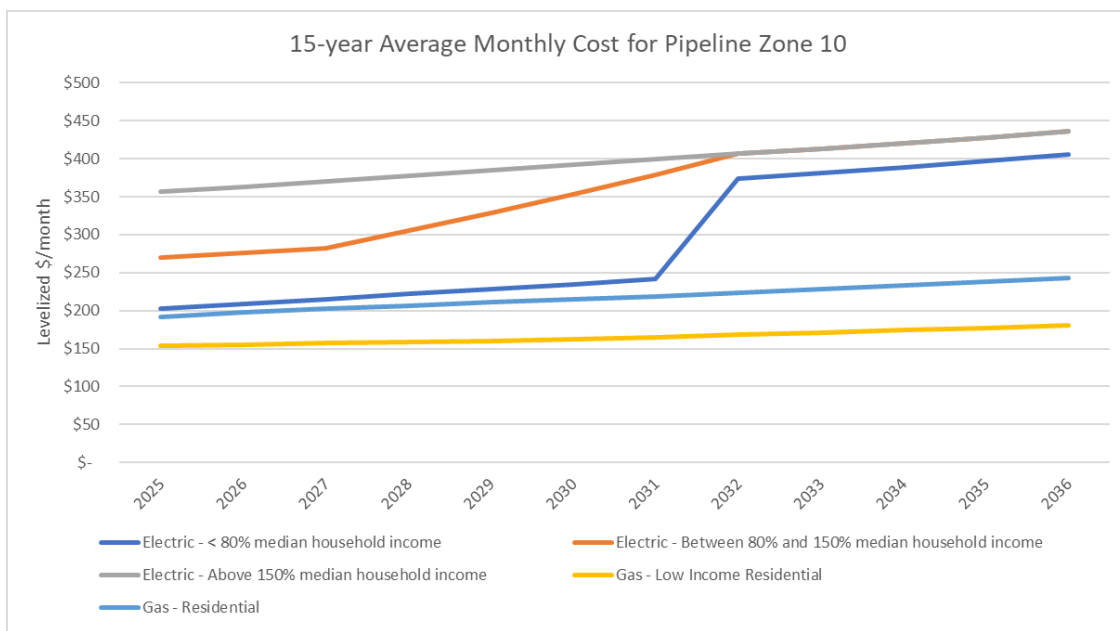
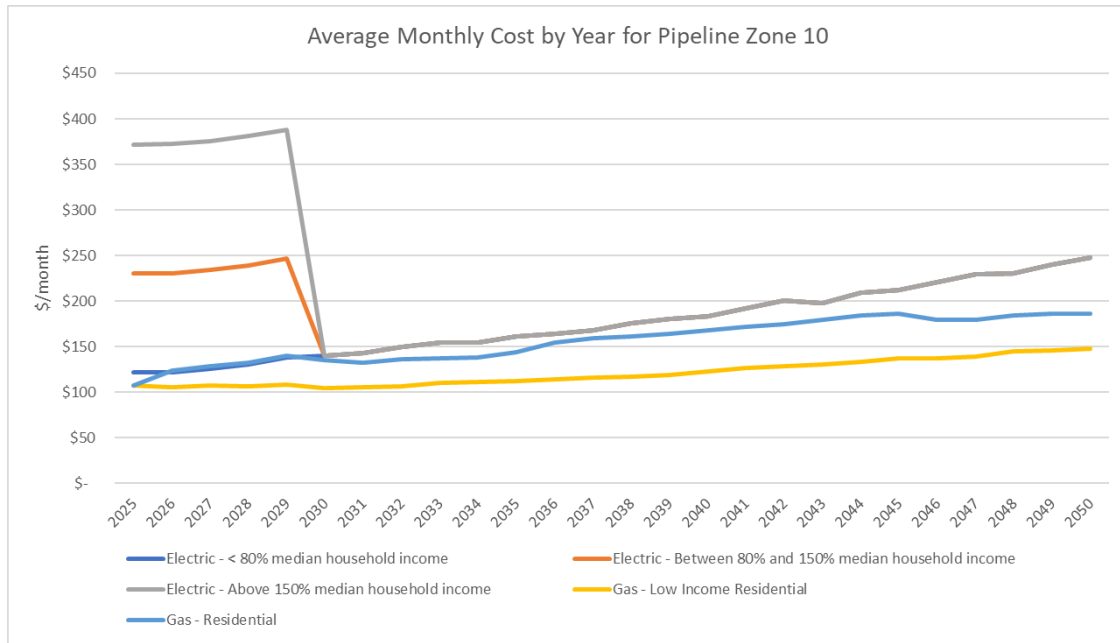
**Zone 30-W**

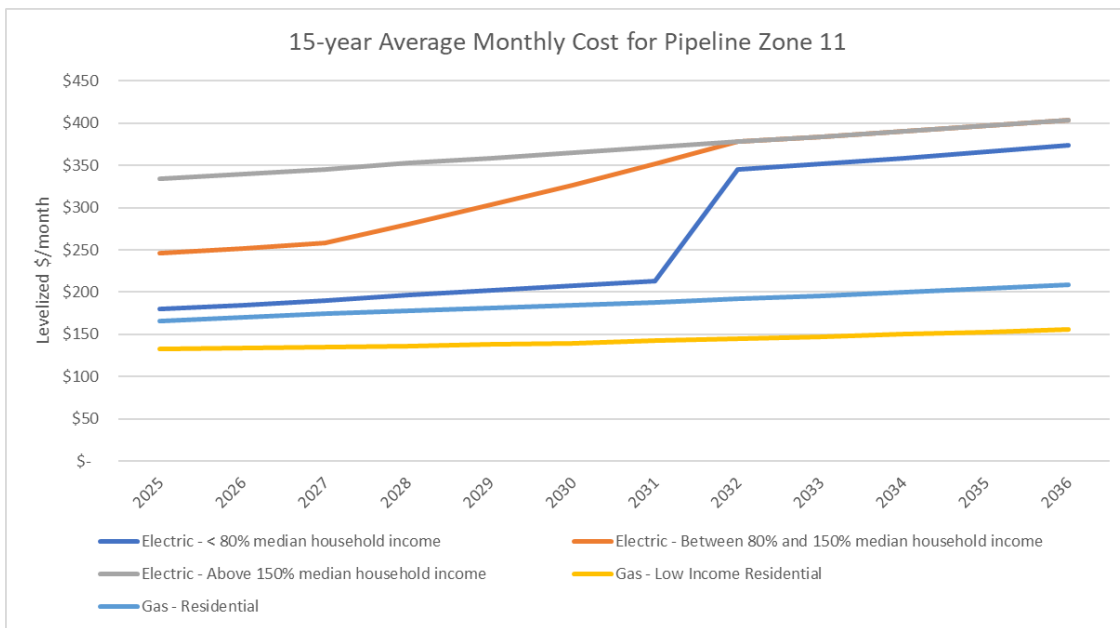
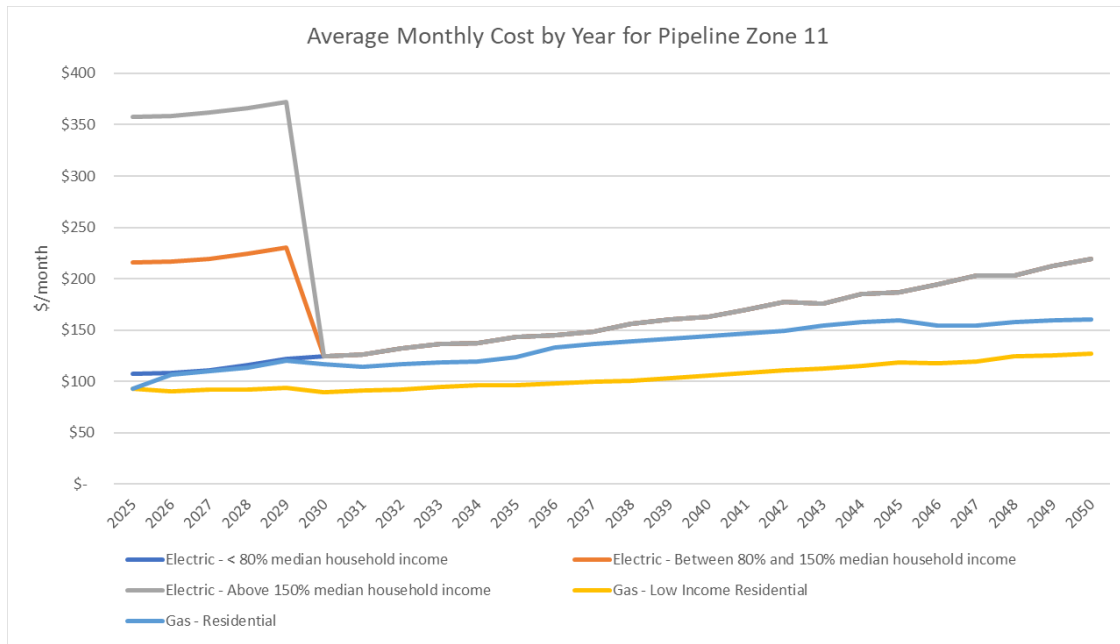


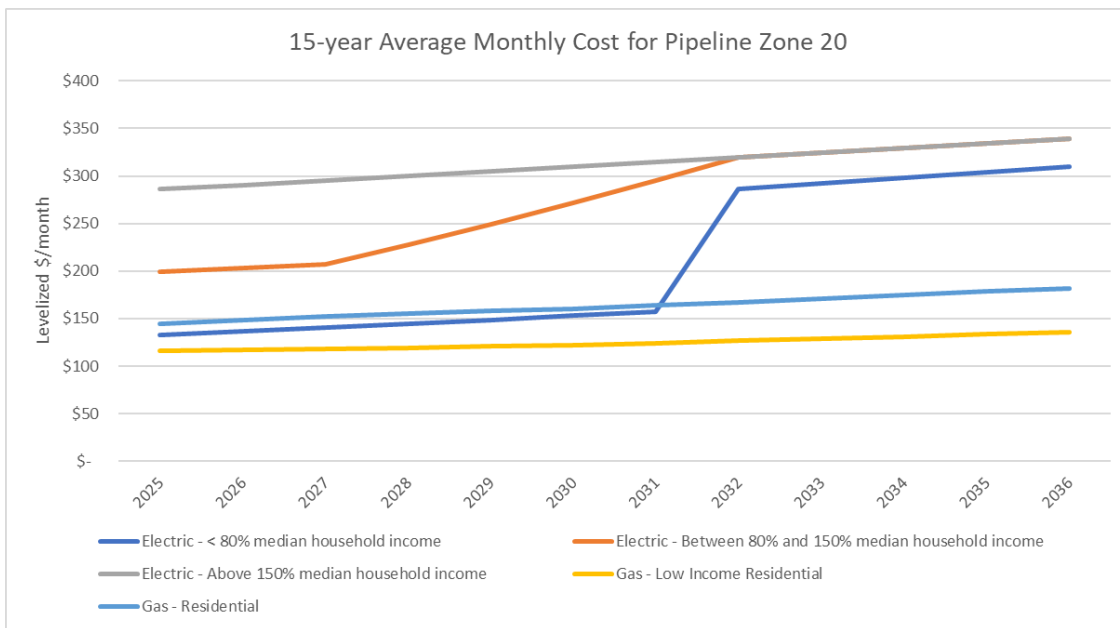
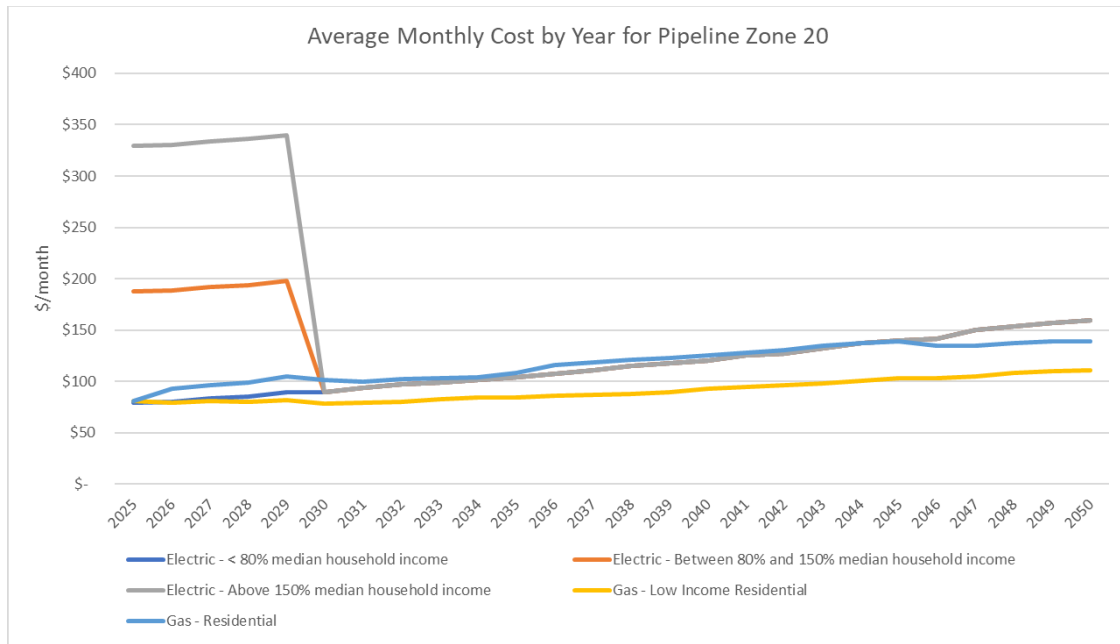
**Zone ME-WA**

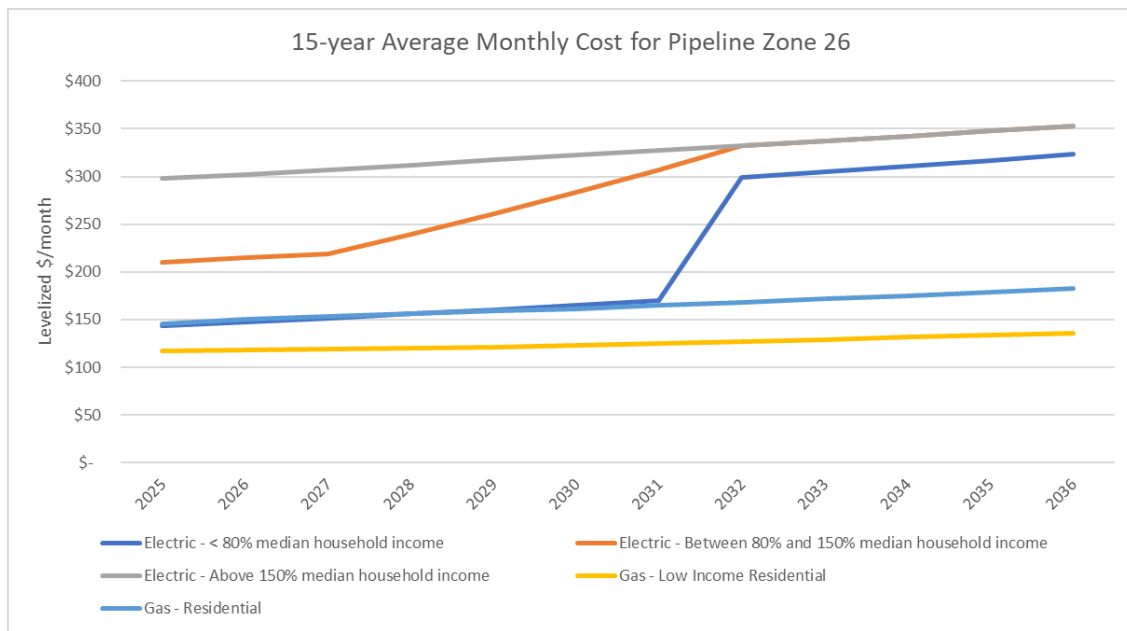
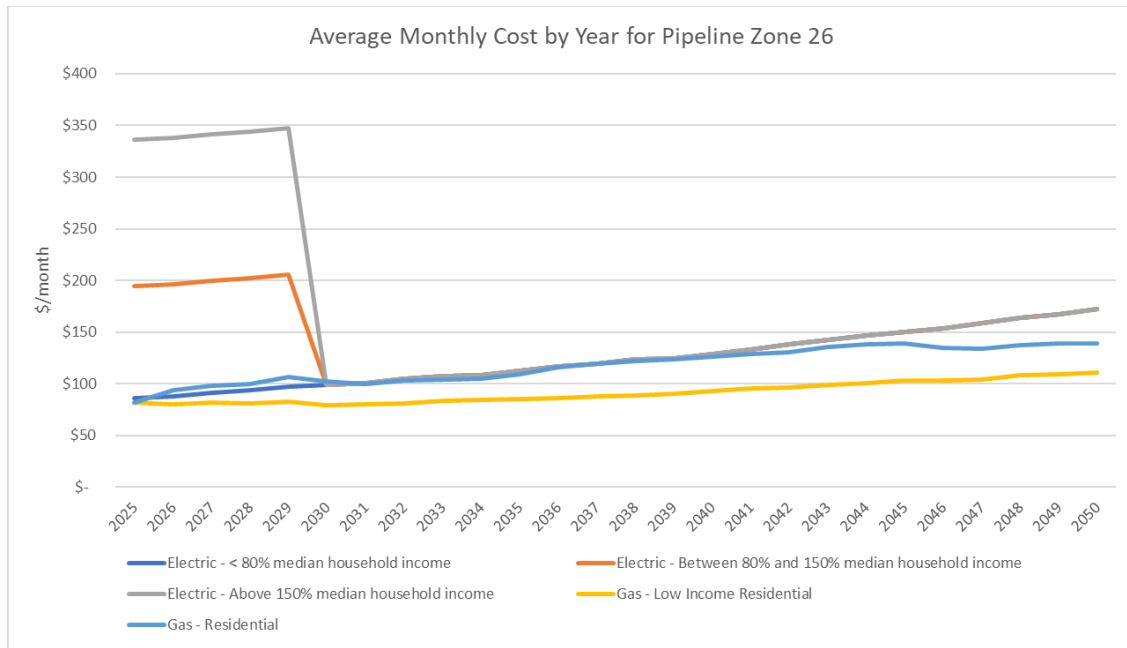
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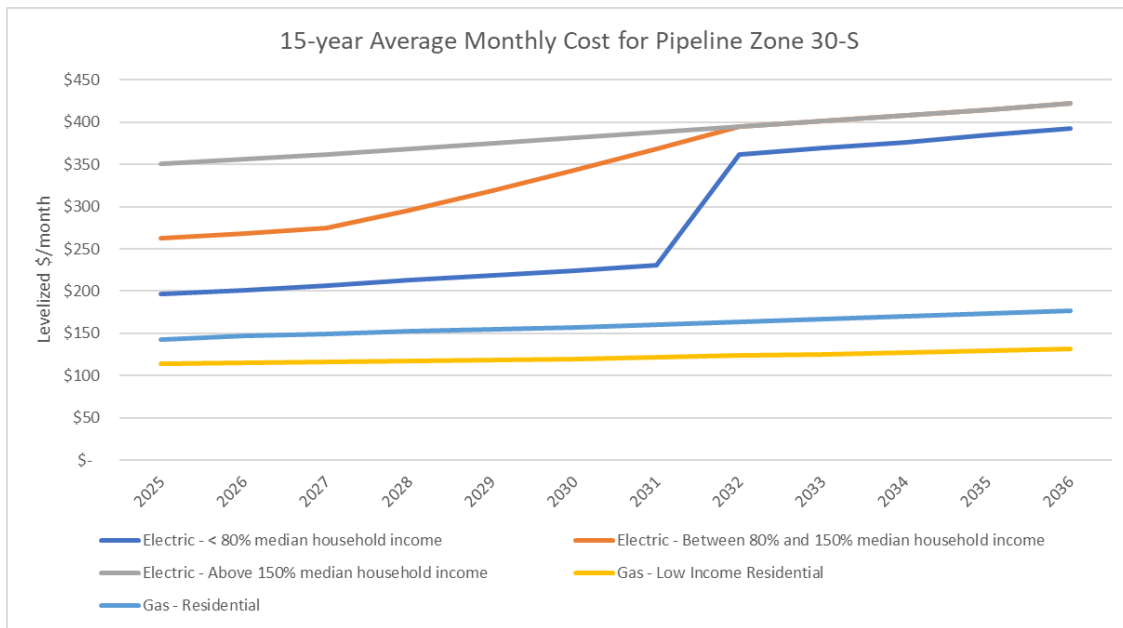
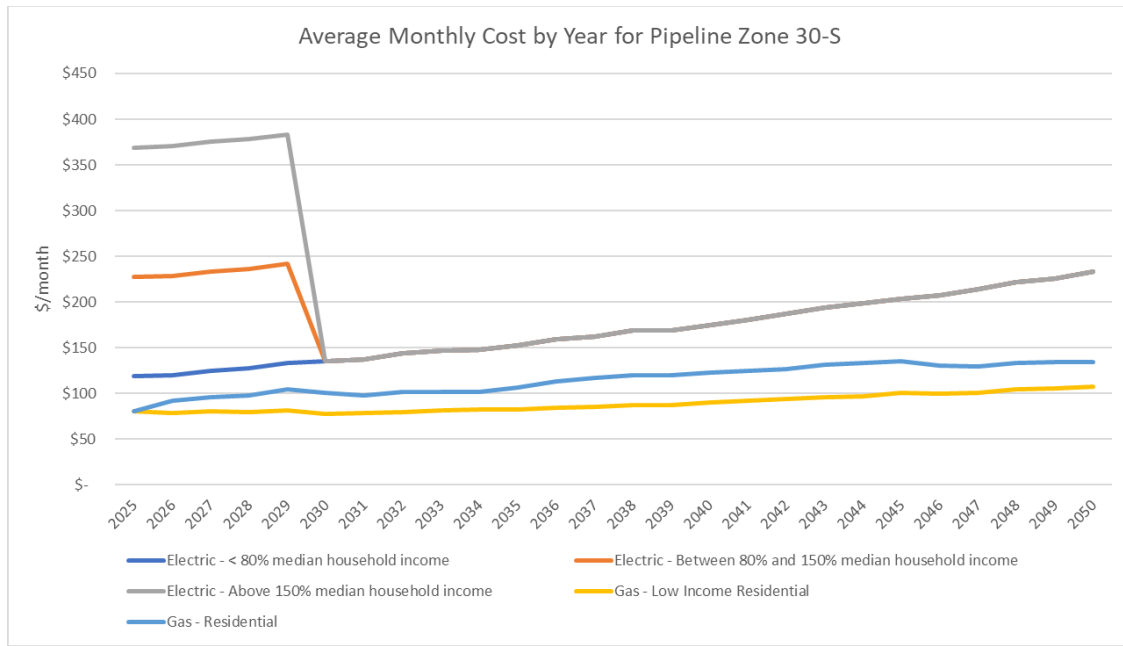
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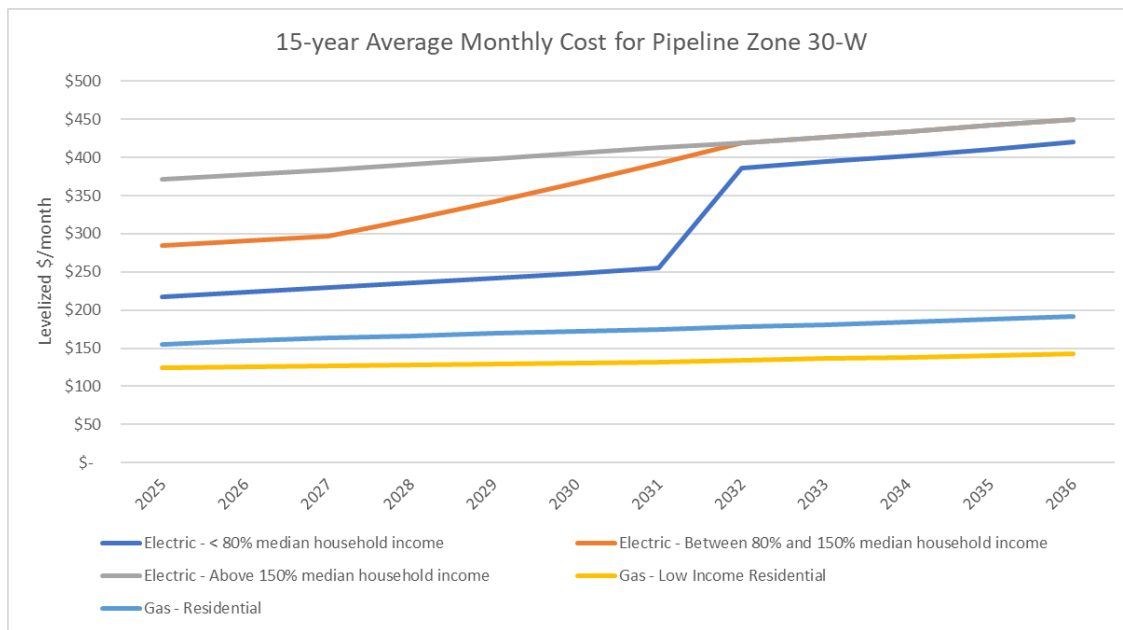
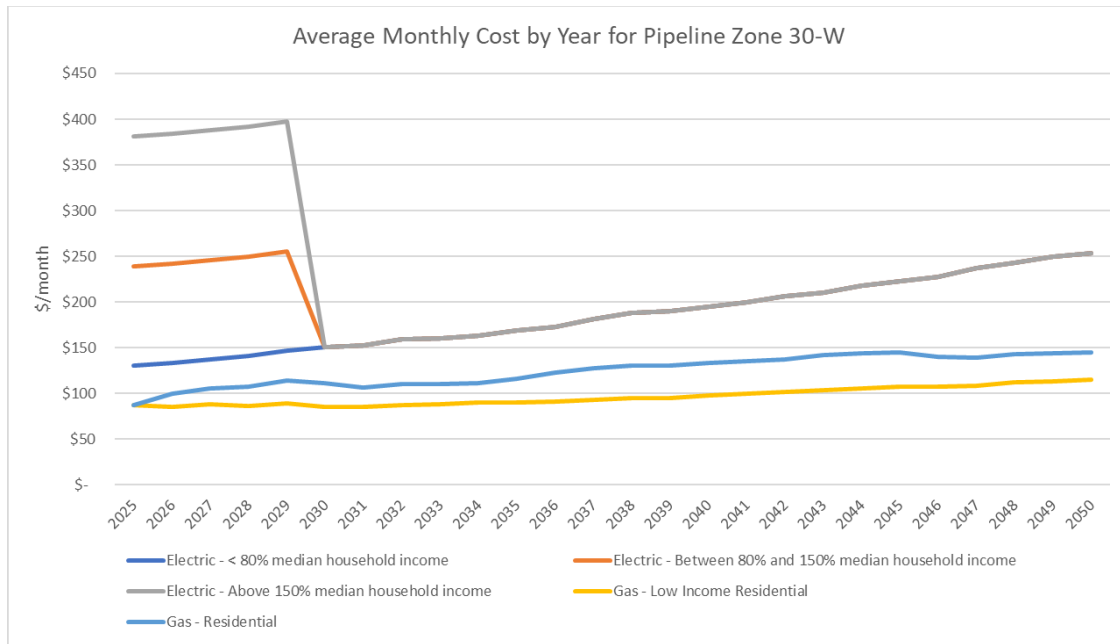


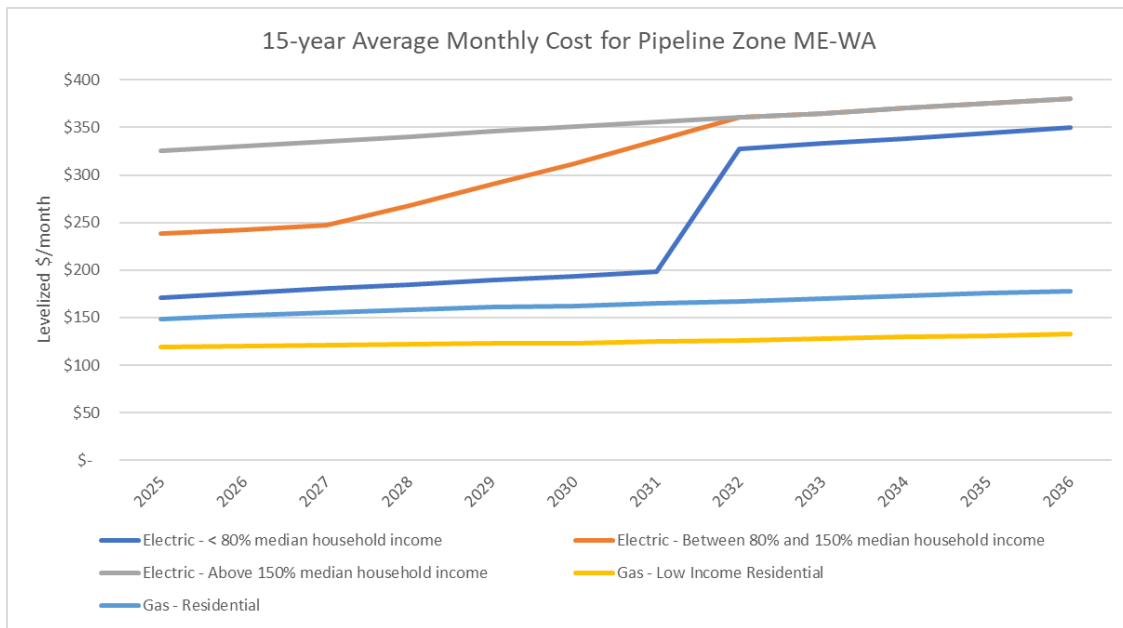
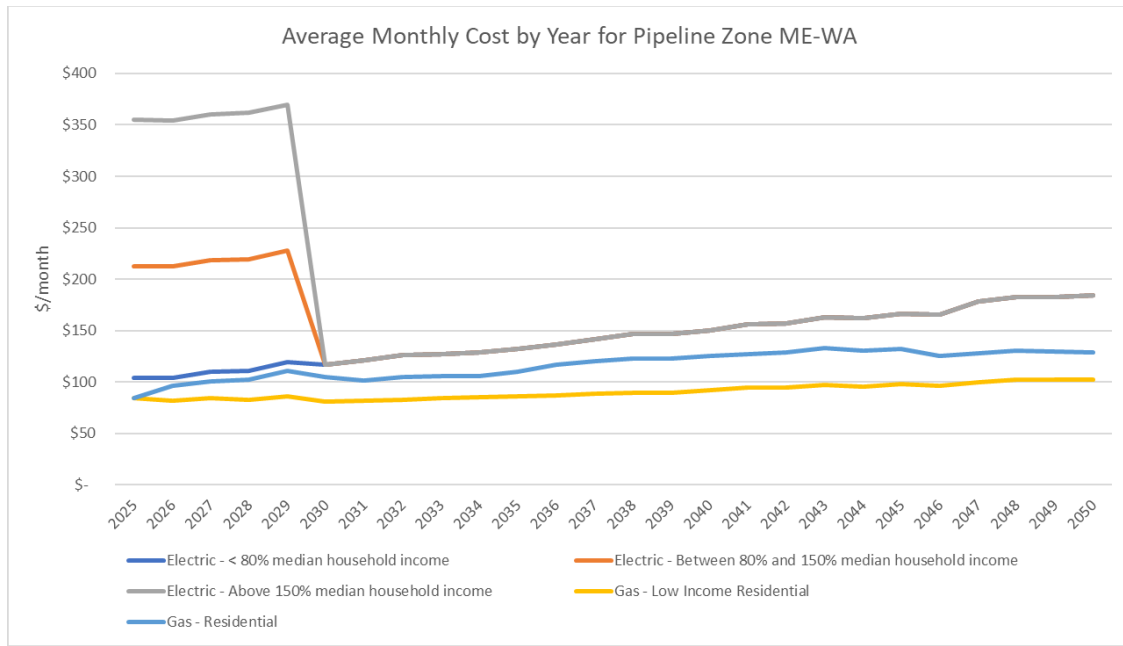
**Zone 11**

**Zone 20**

**Zone 26**

**Zone 30-S**

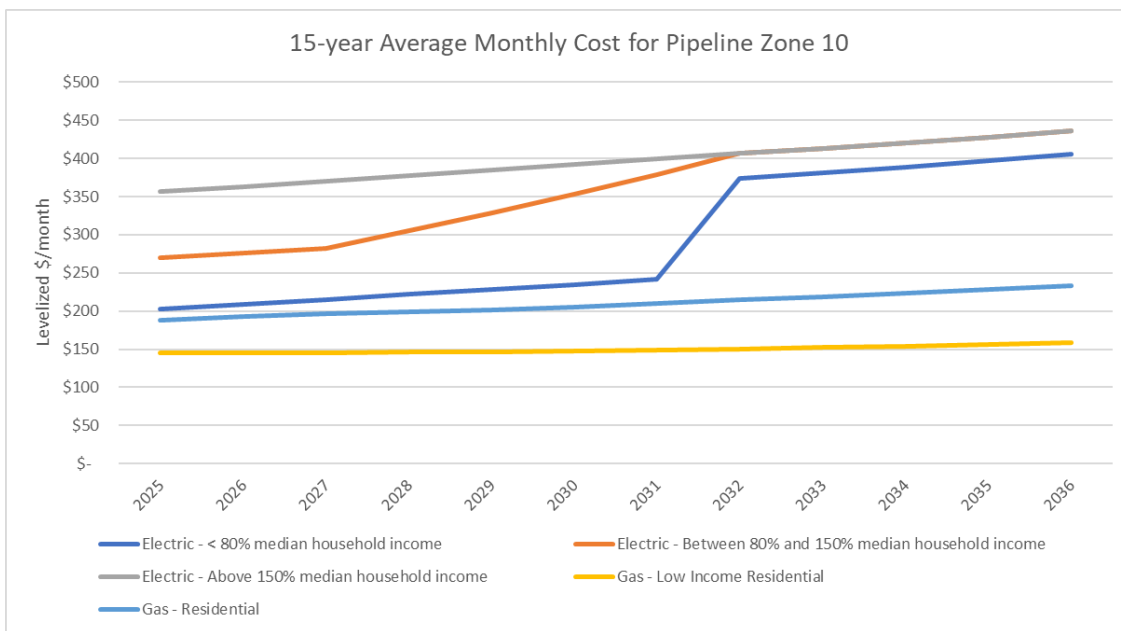
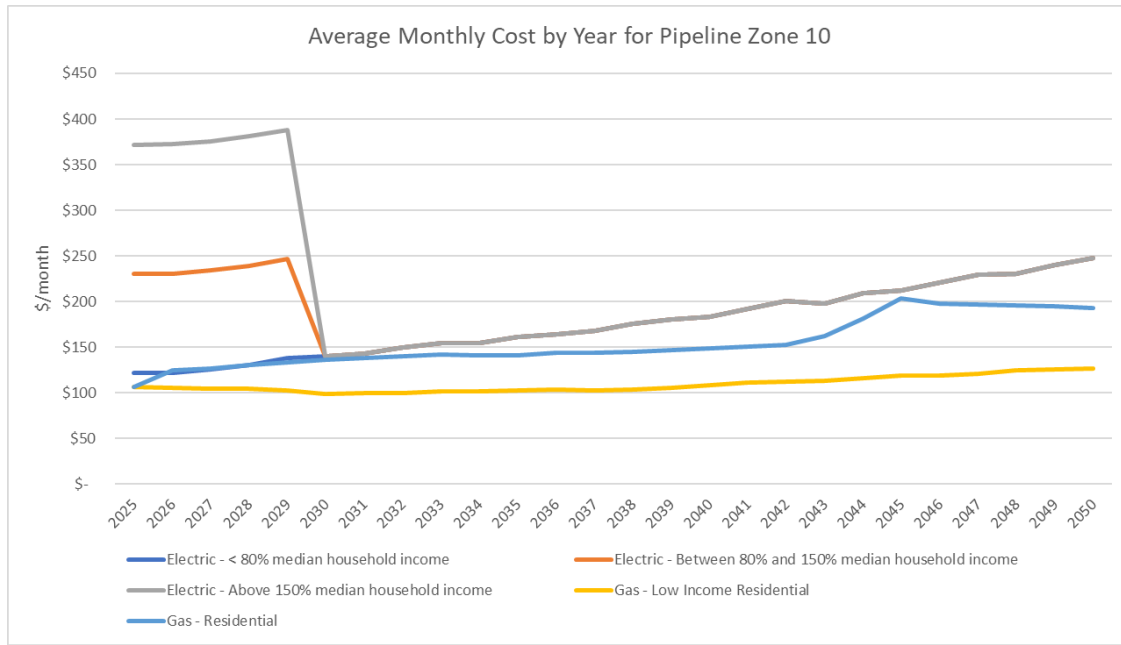
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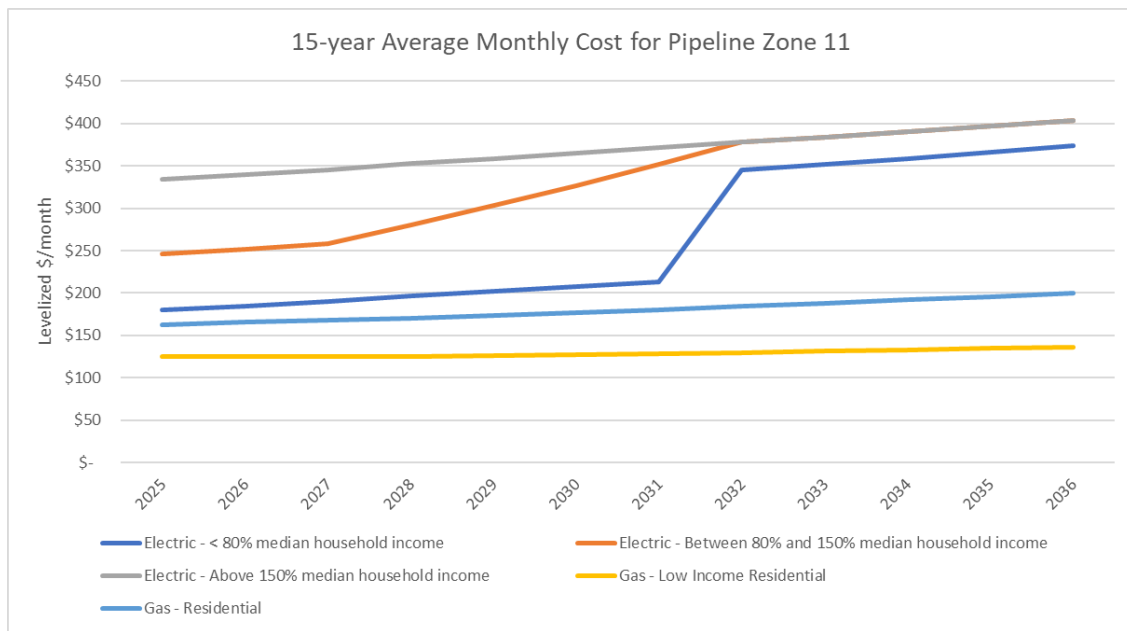
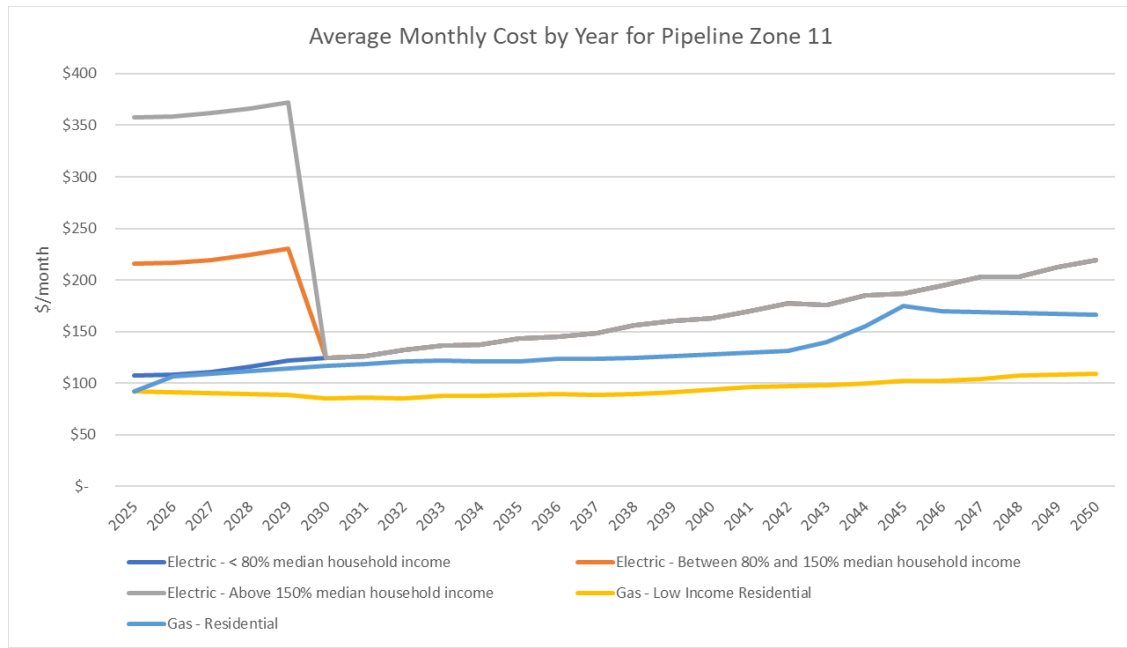
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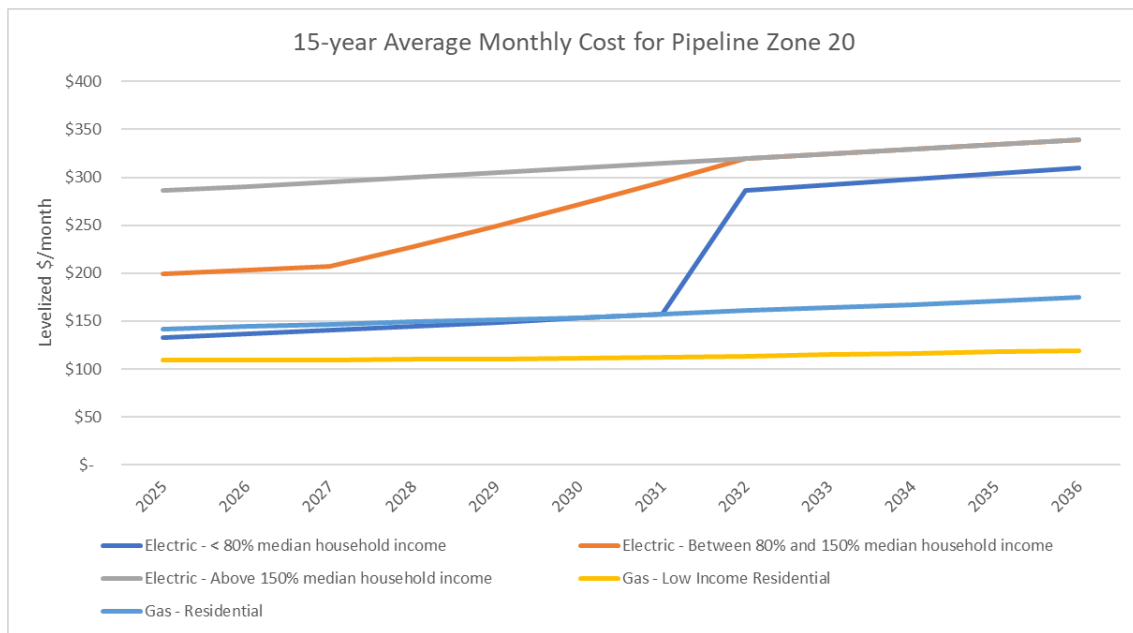
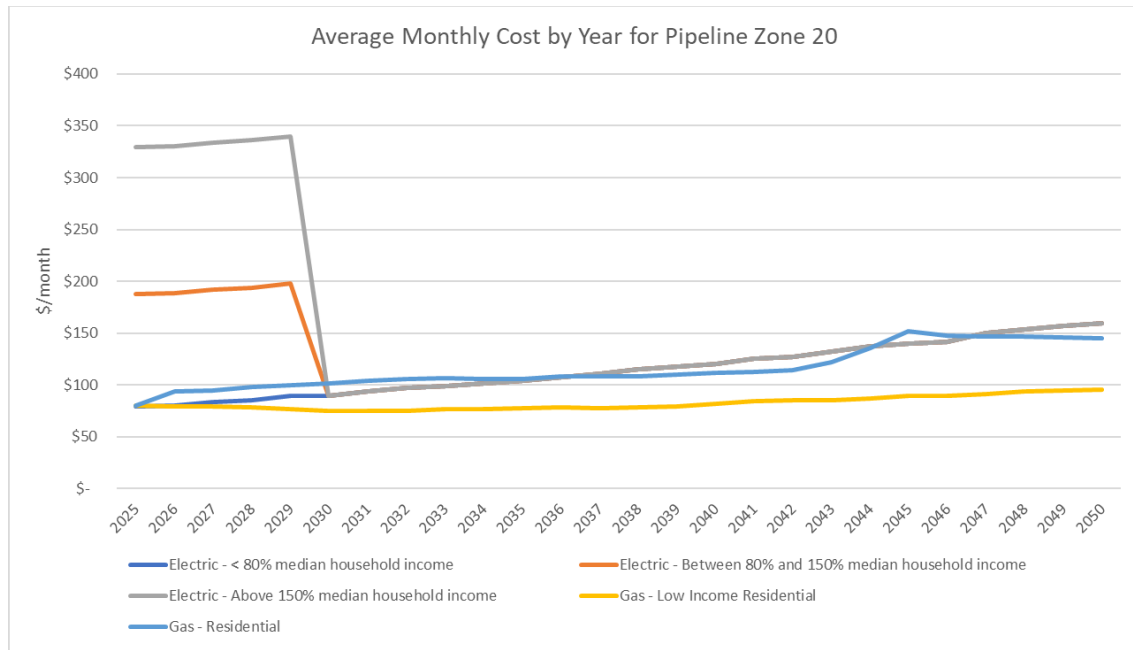


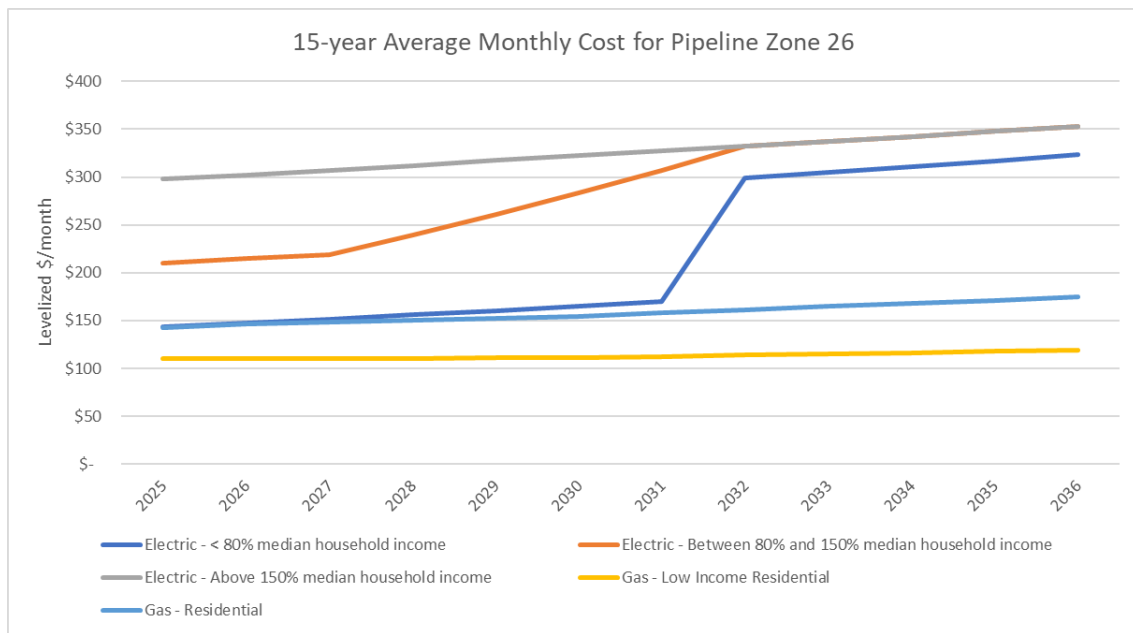
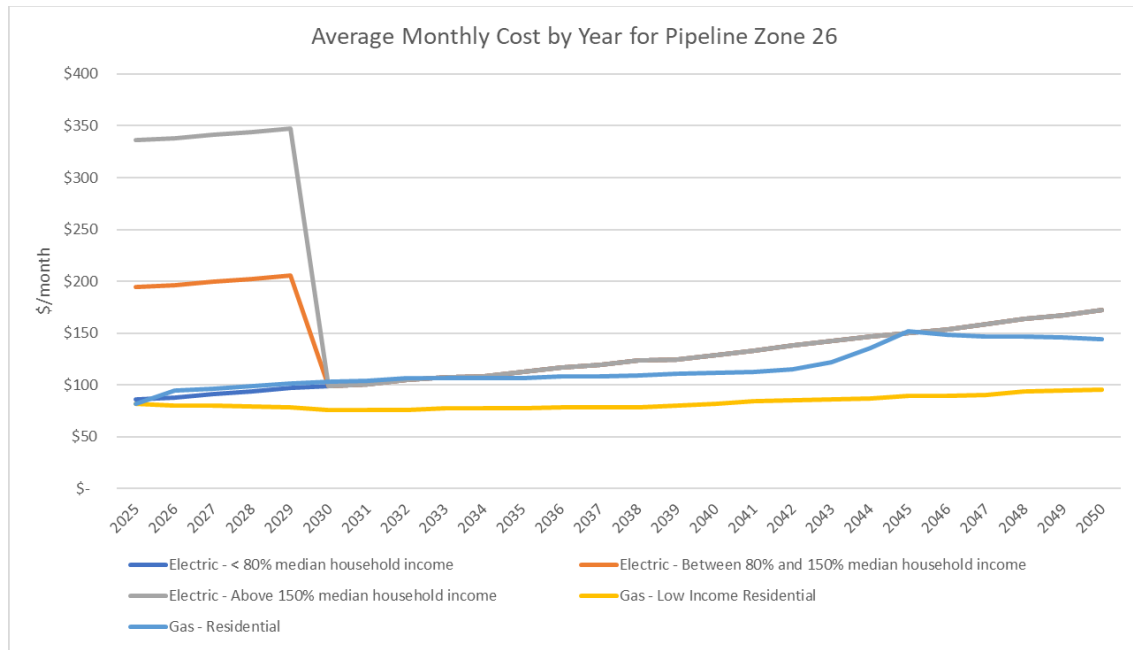
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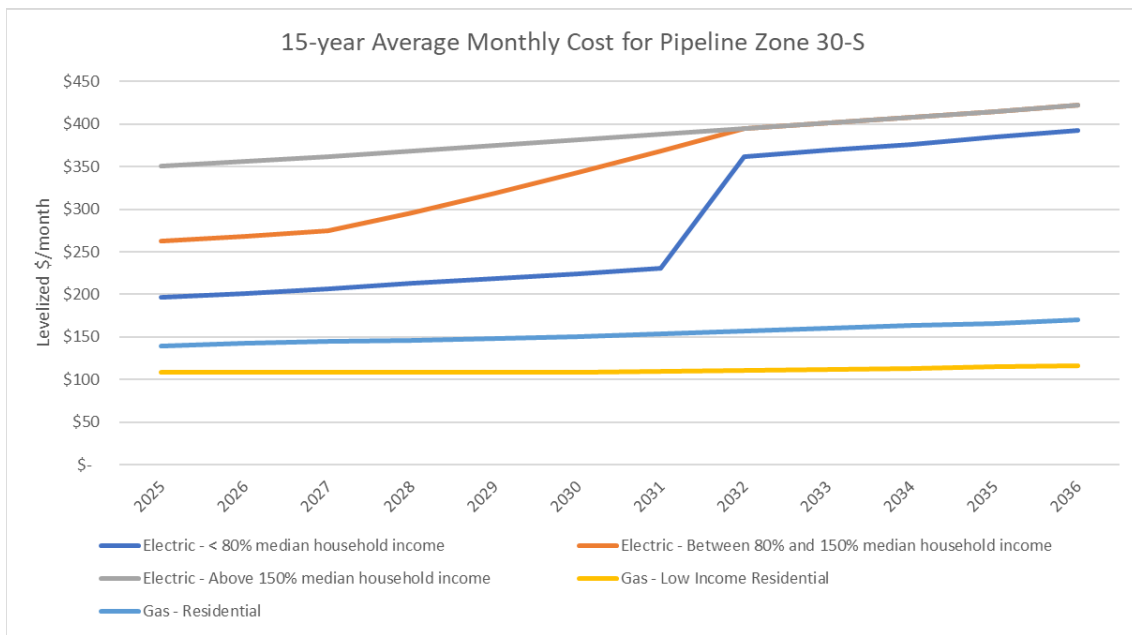
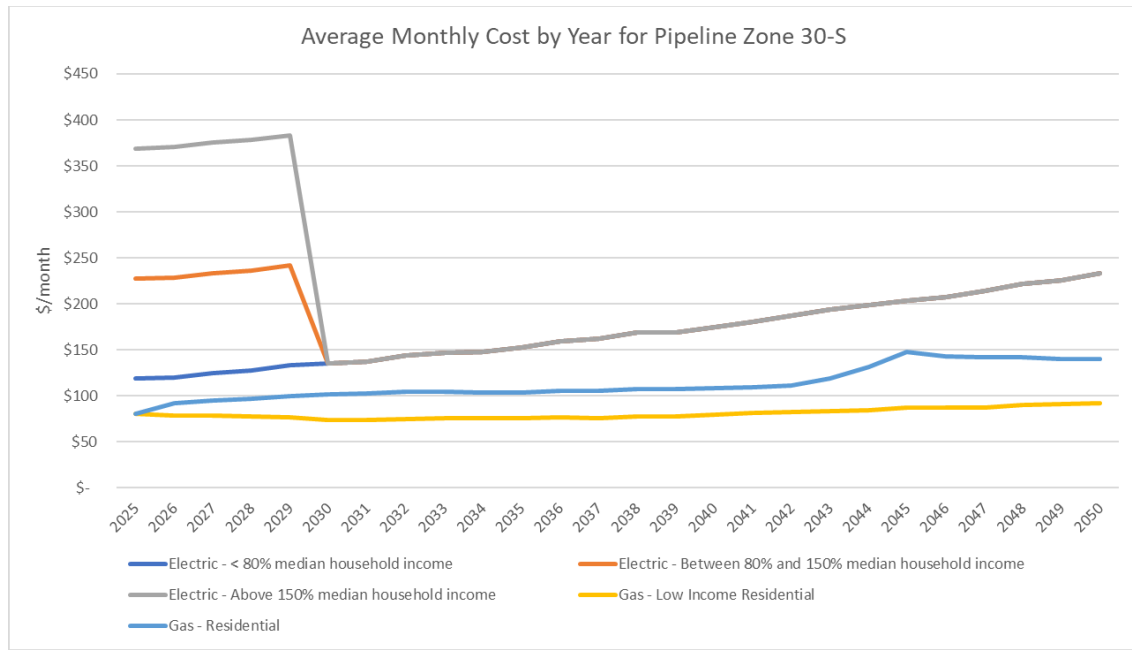
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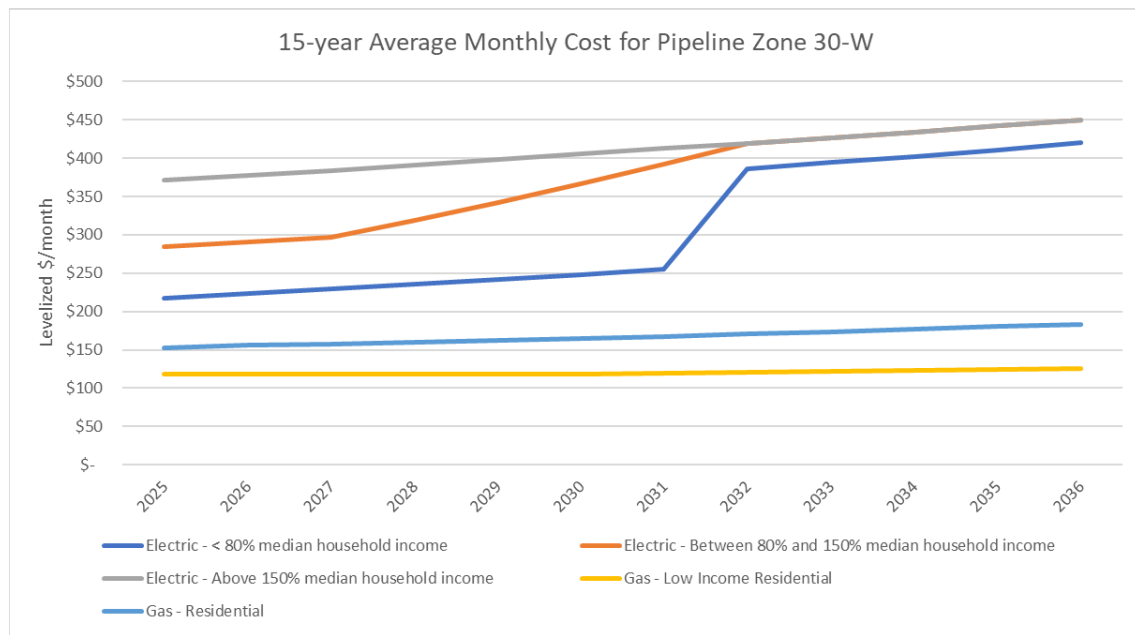
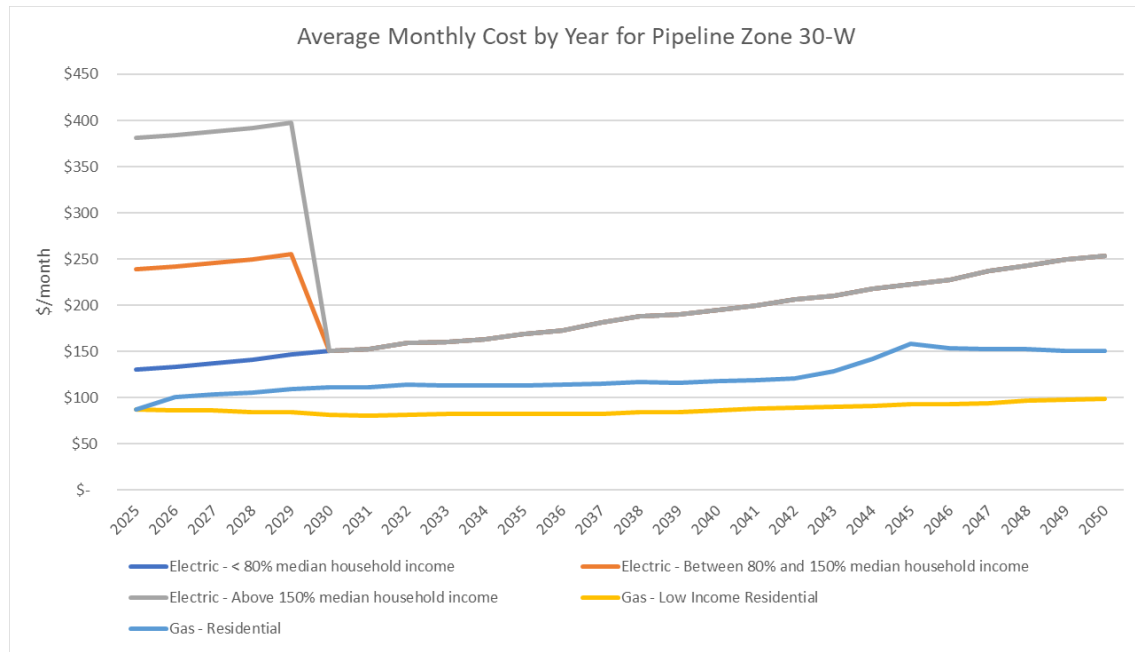


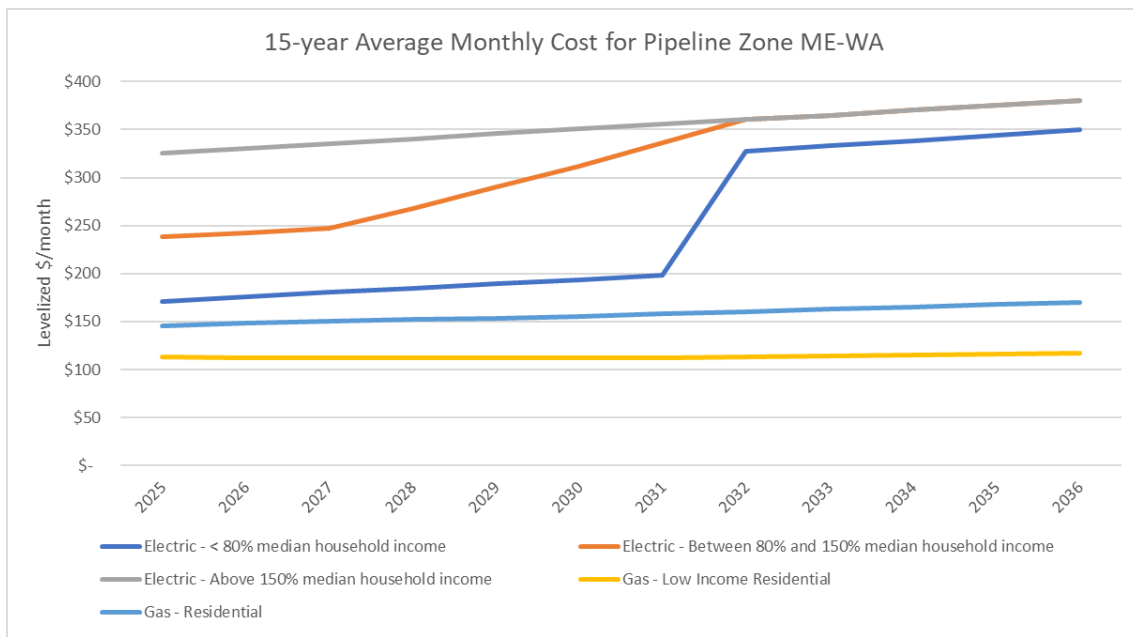
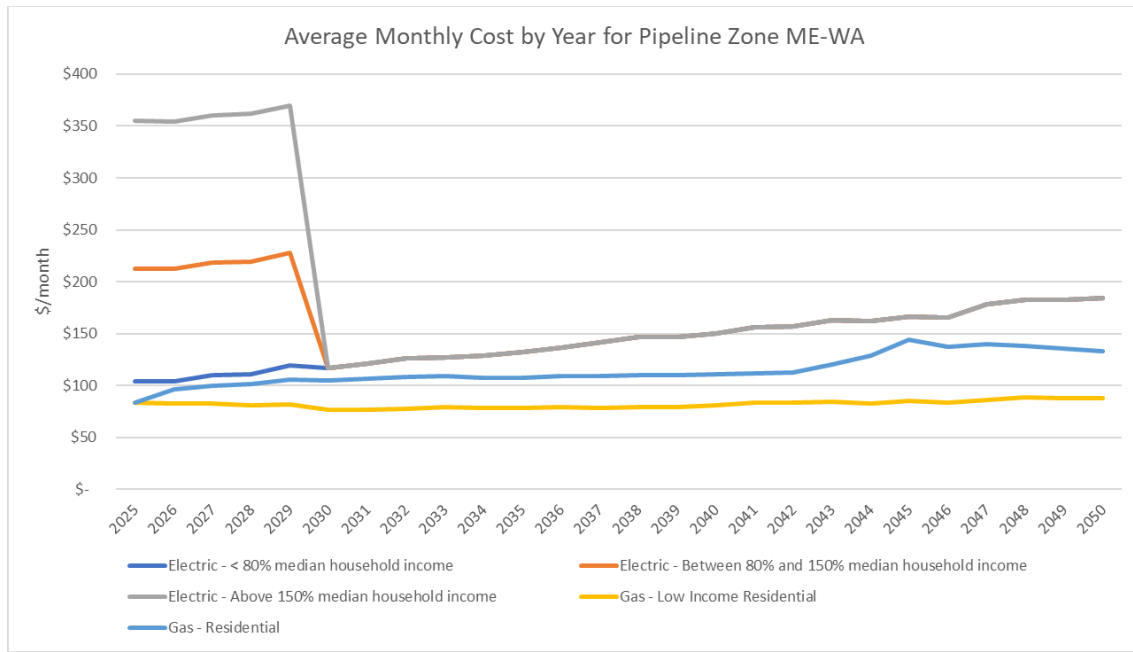
**Zone 11**

**Zone 20**

**Zone 26**

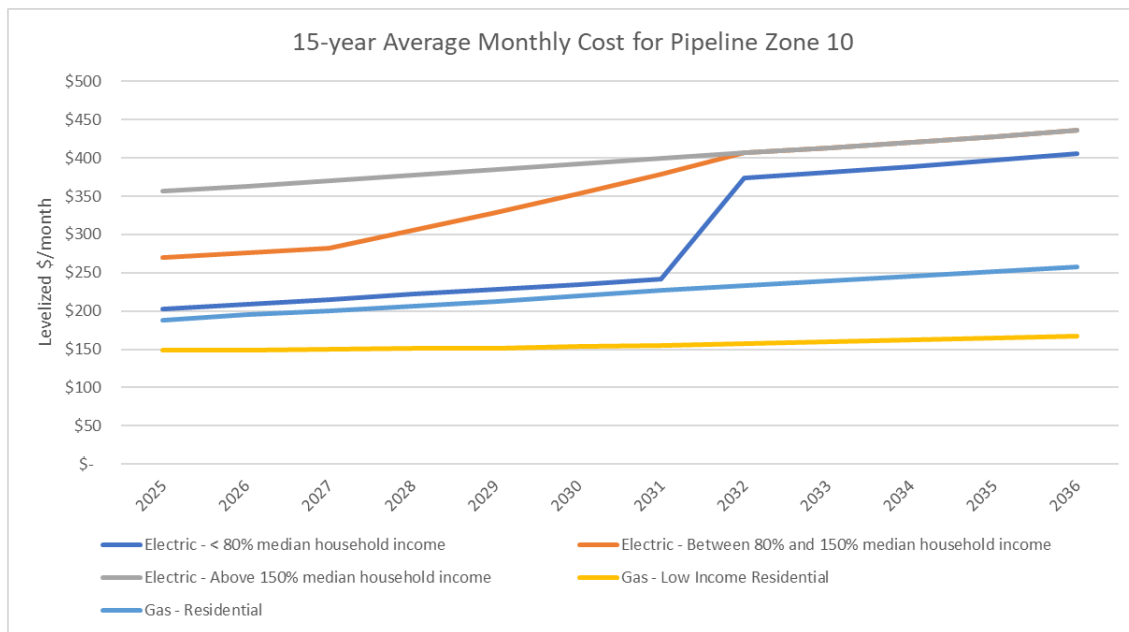
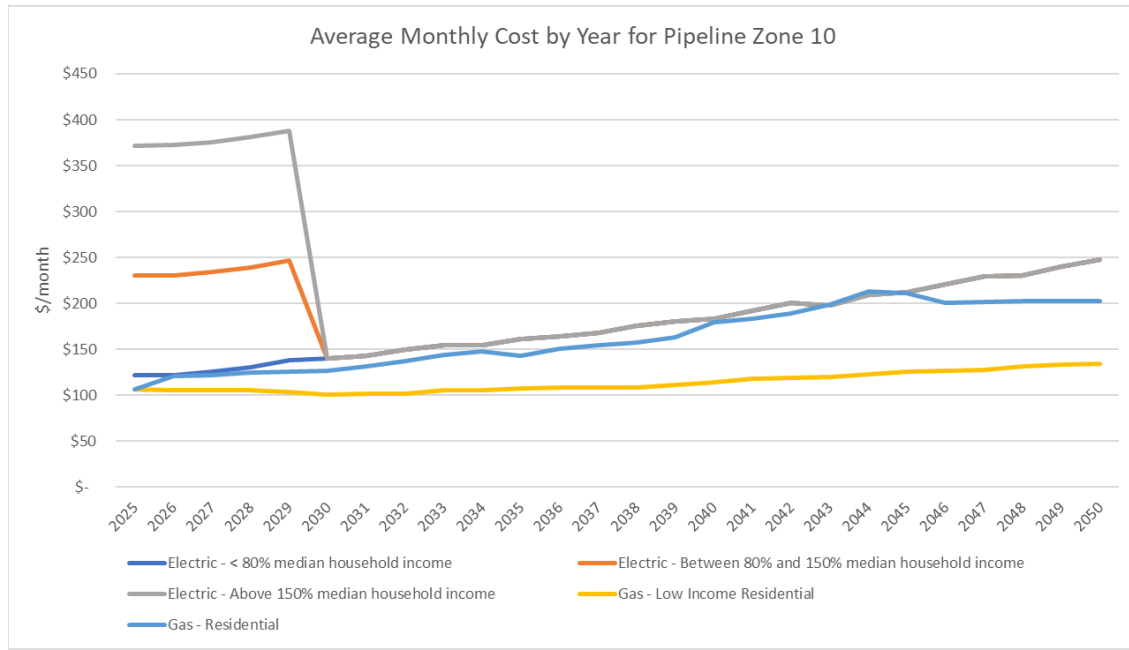
**Zone 30-S**

**Zone 30-W**

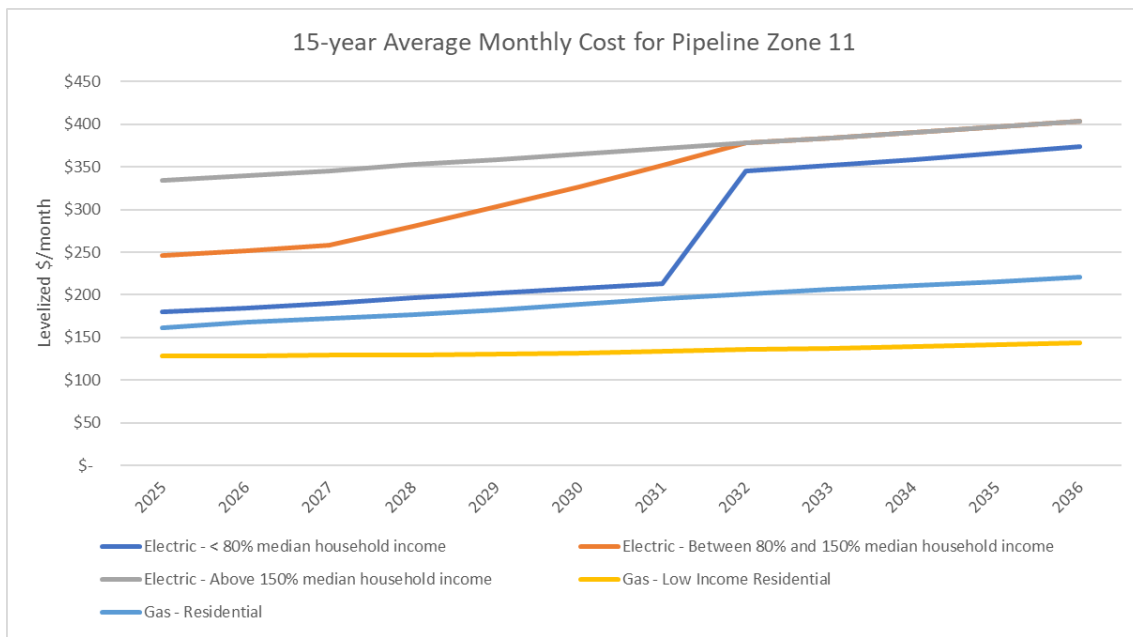
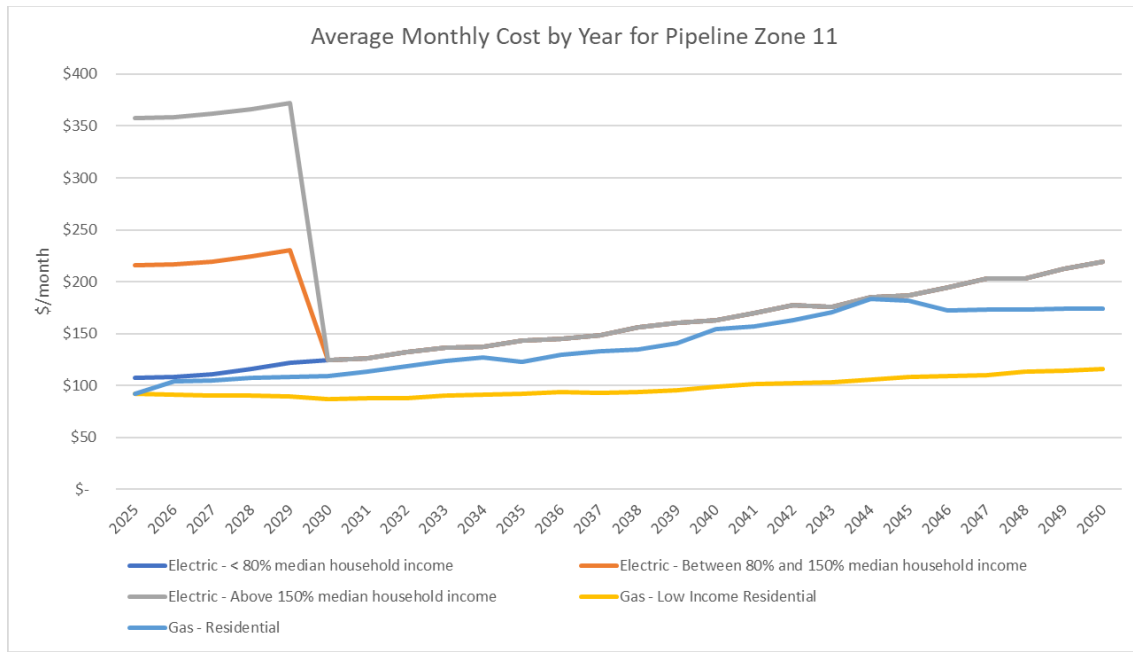
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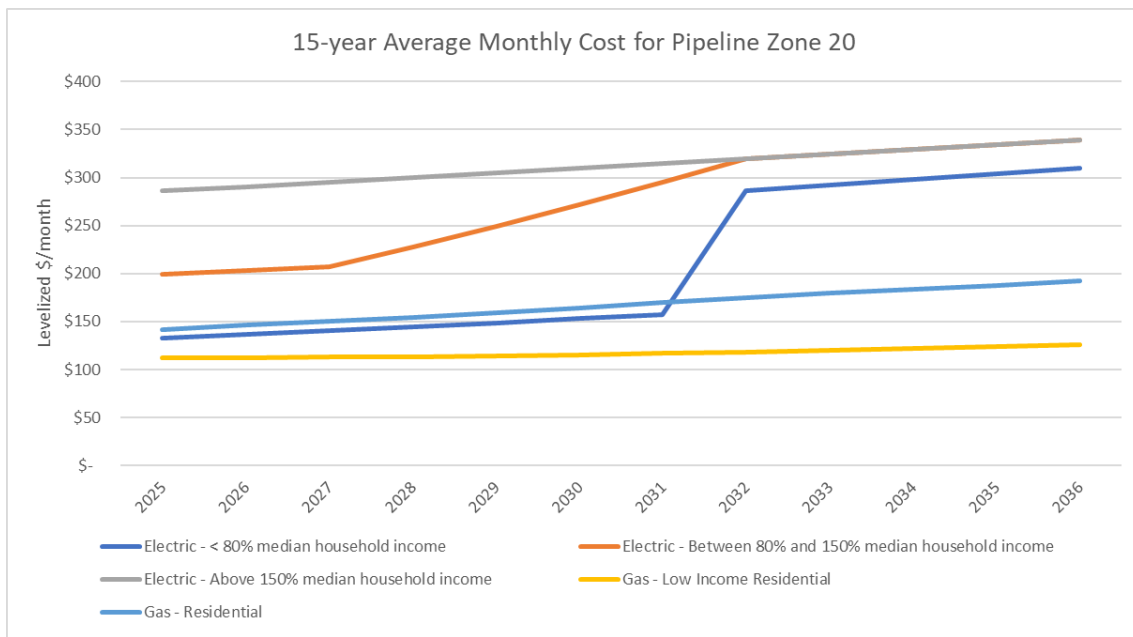
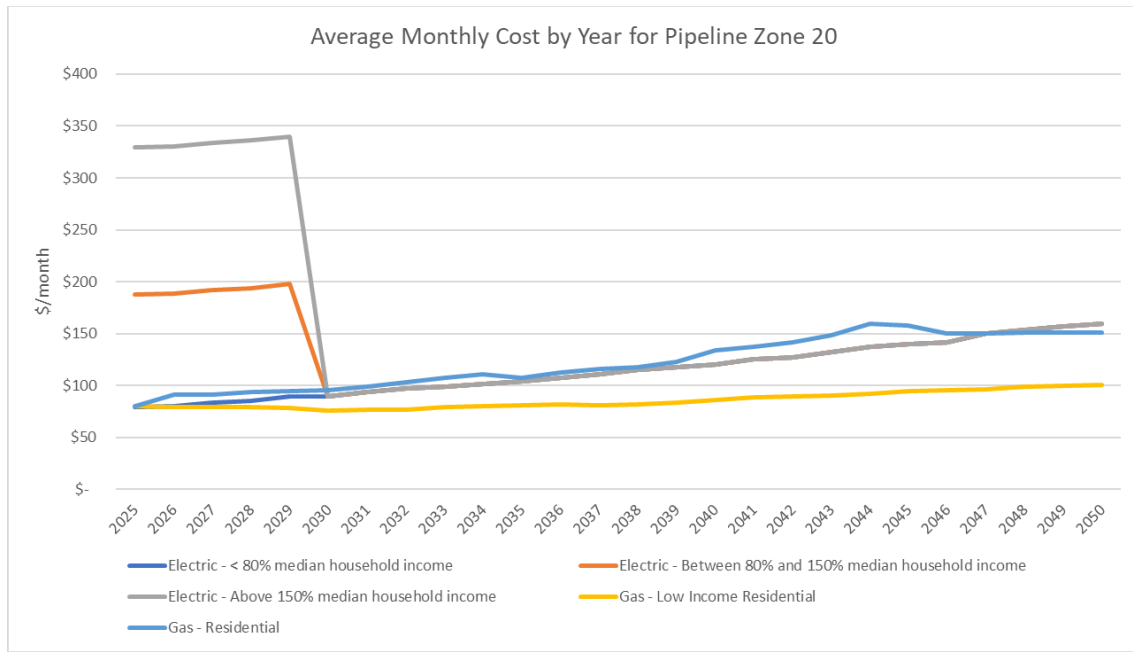
## Monte Carlo Simulations - Company Perspective (Furnace Cost Reduction Not Included)

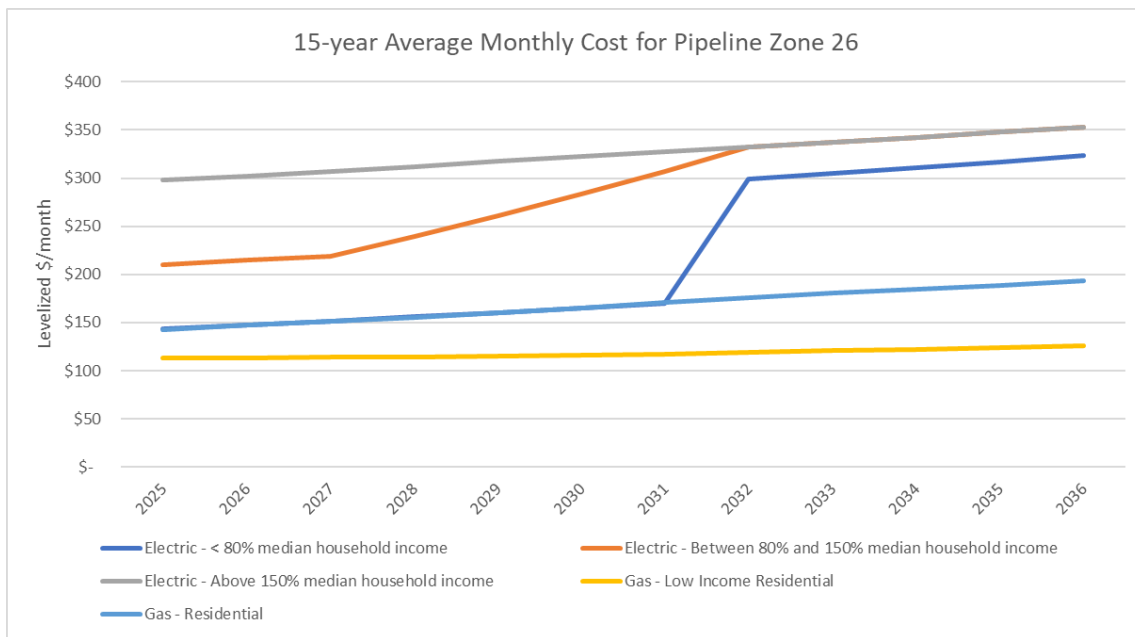
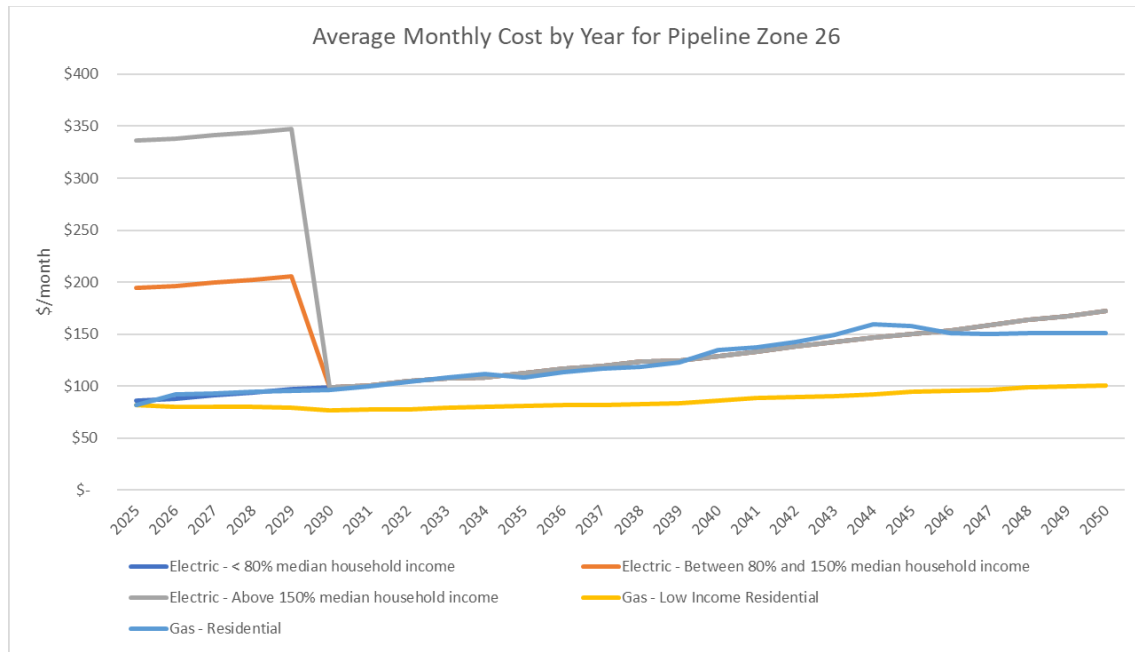
### Zone 10

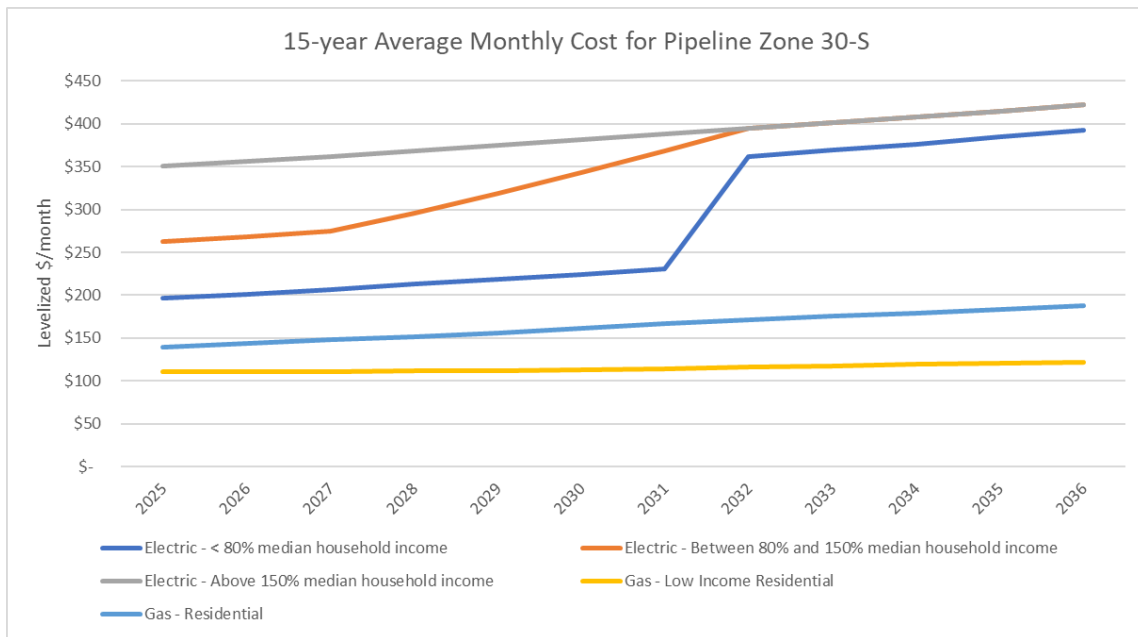
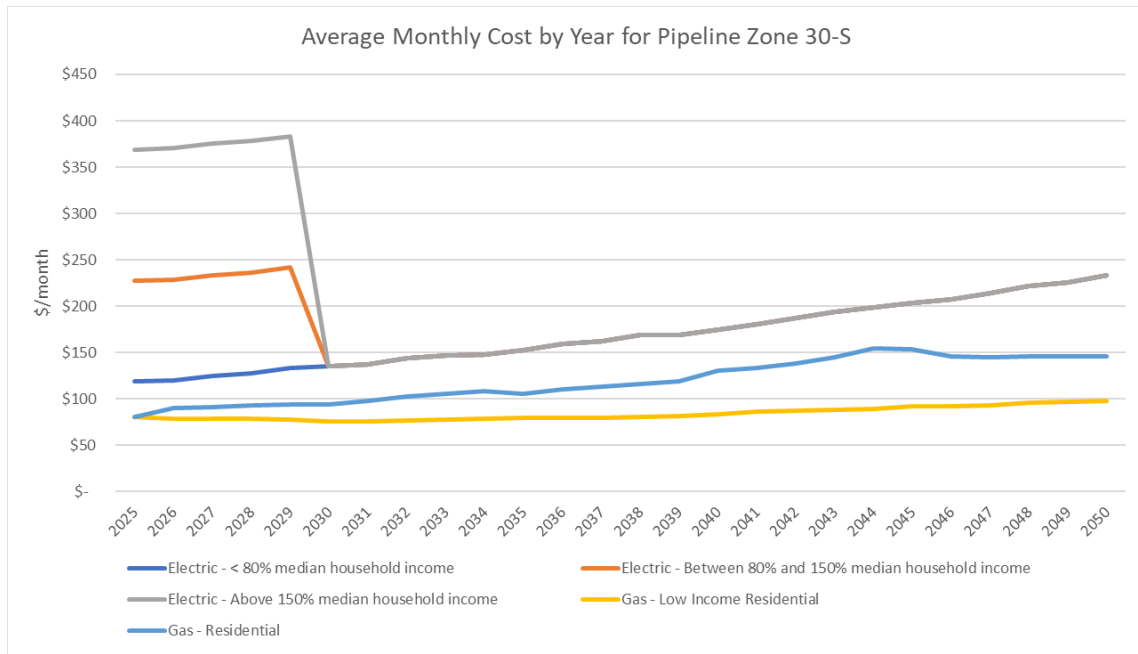


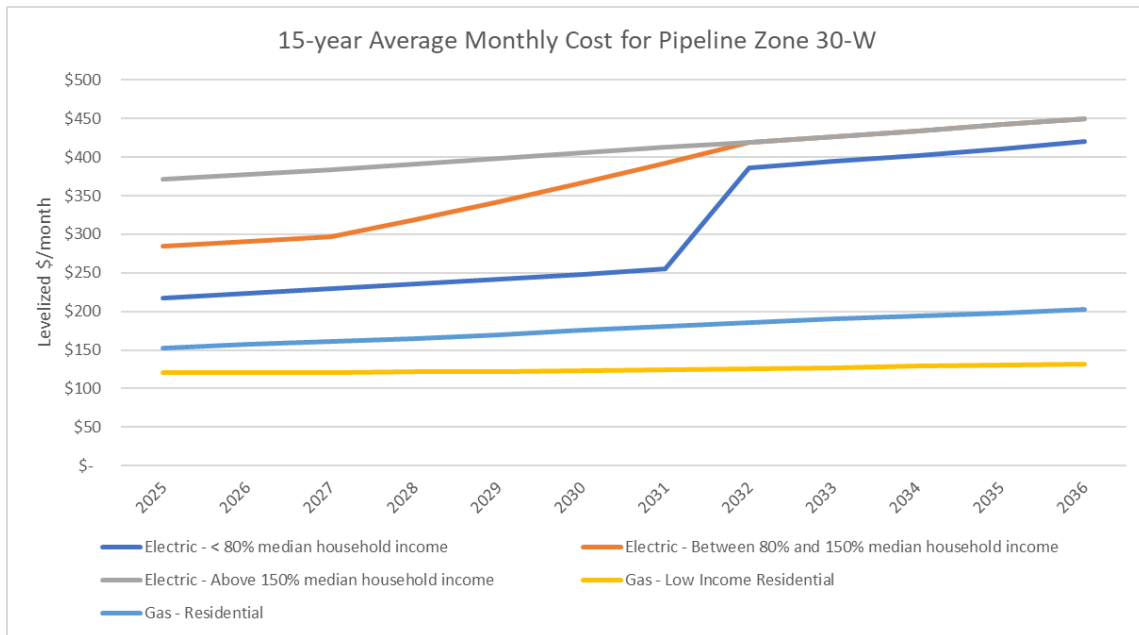
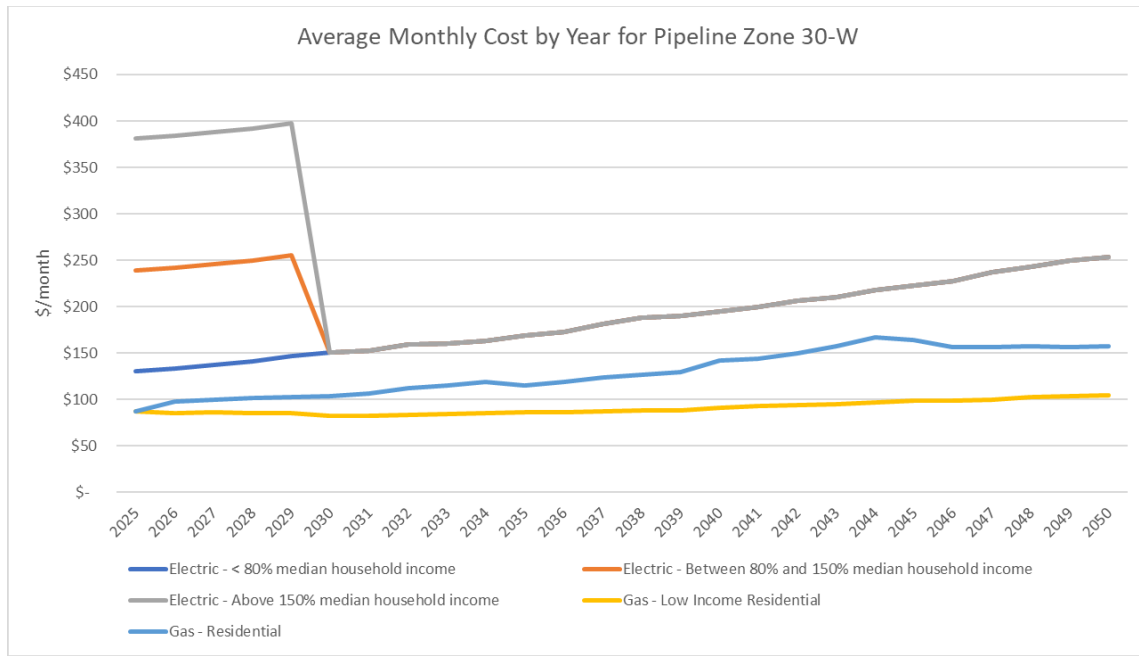


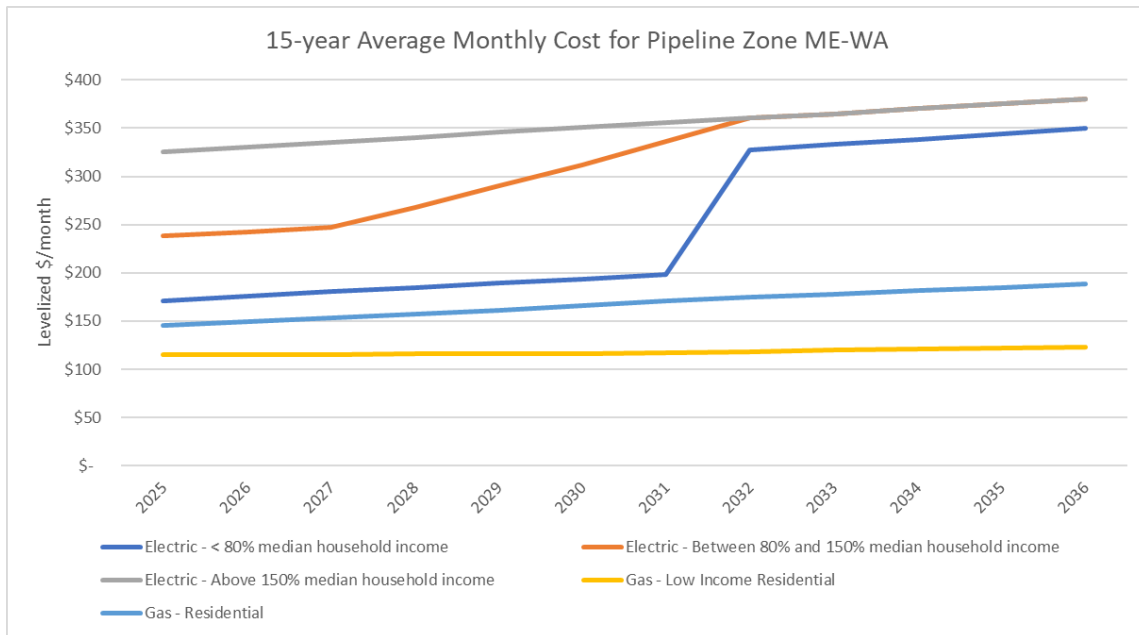
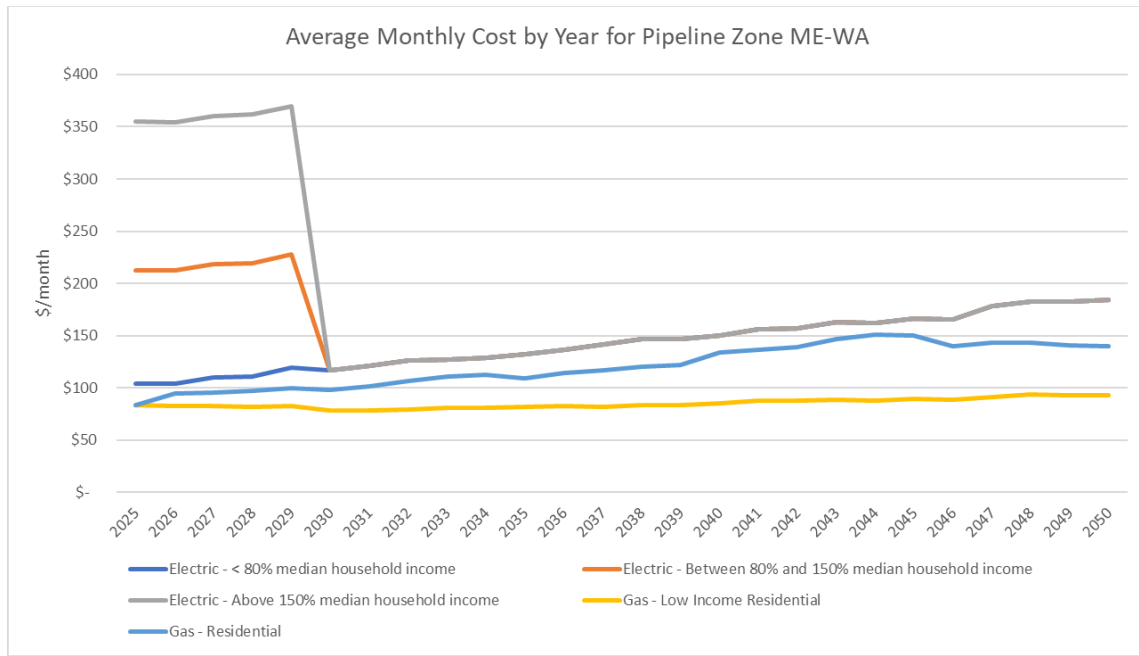
**Zone 11**

**Zone 20**

**Zone 26**

**Zone 30-S**

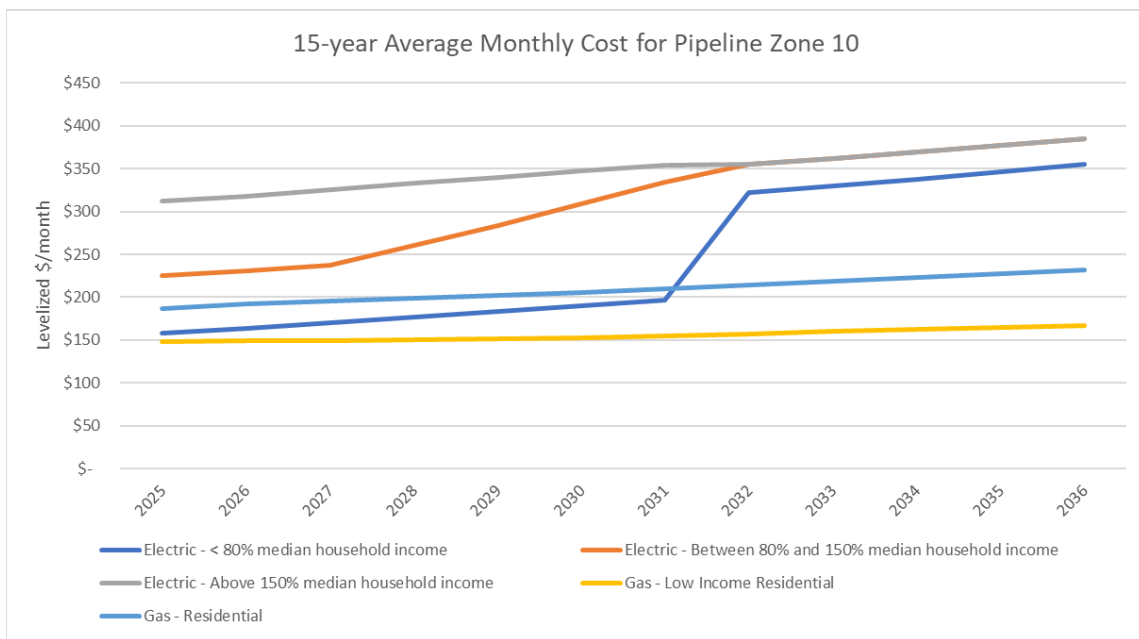
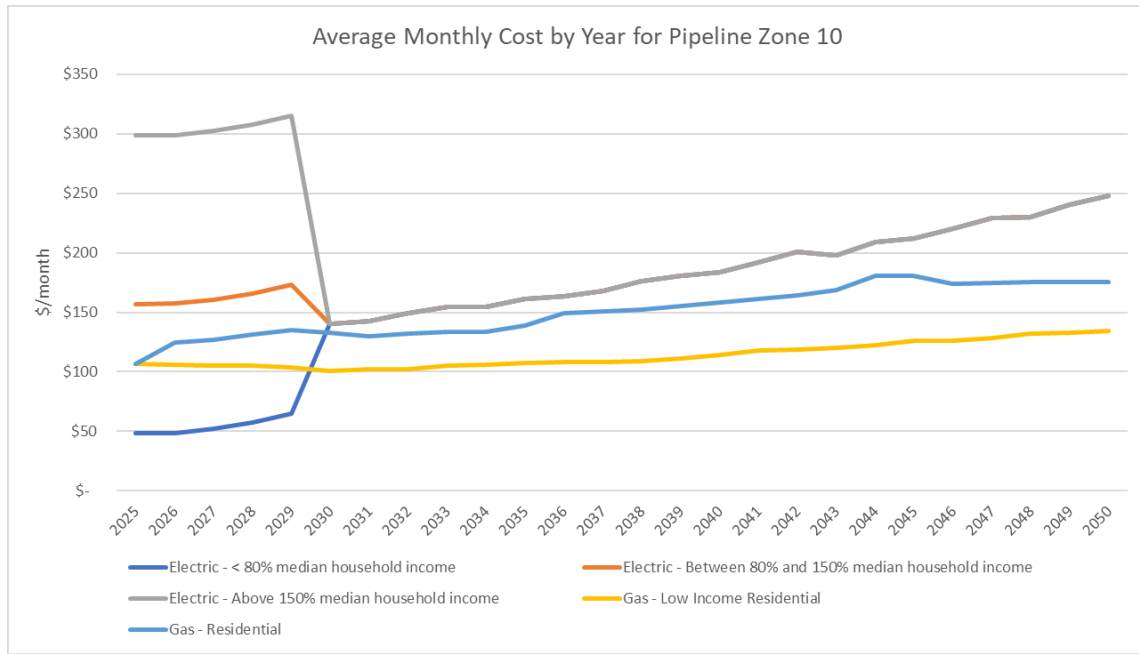
**Zone 30-W**

**Zone ME-WA**

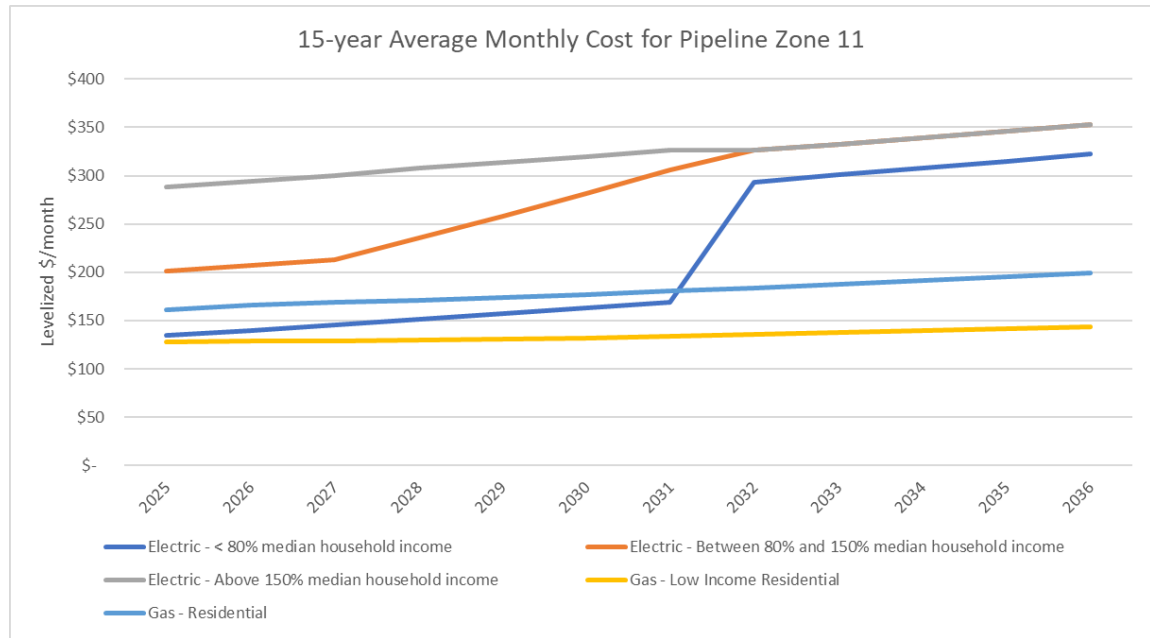
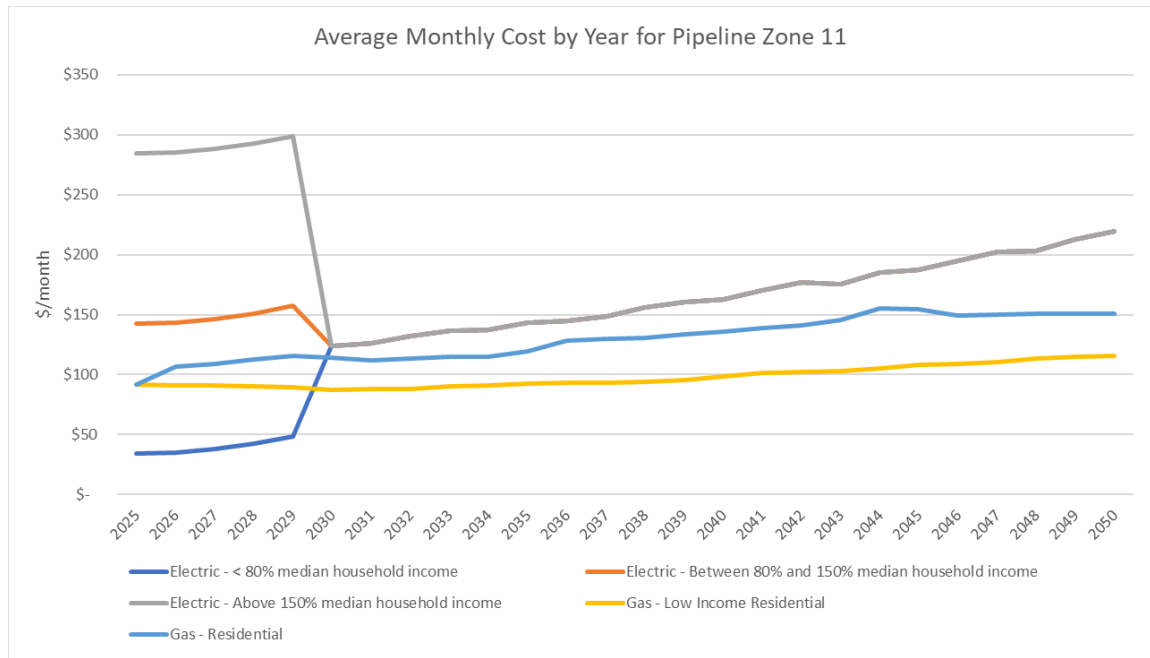
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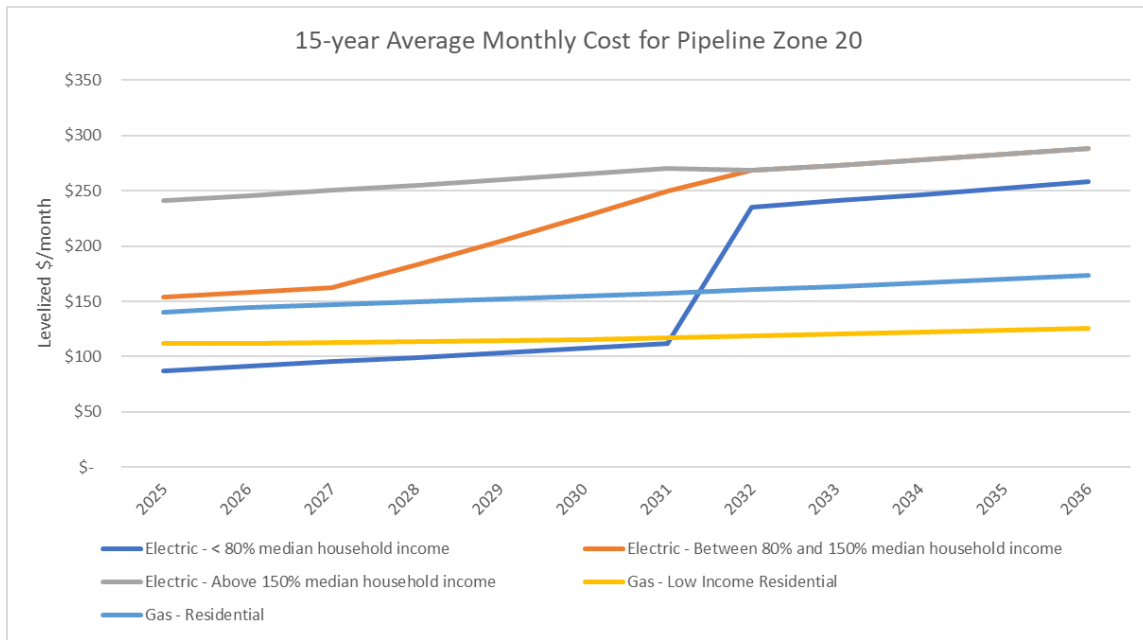
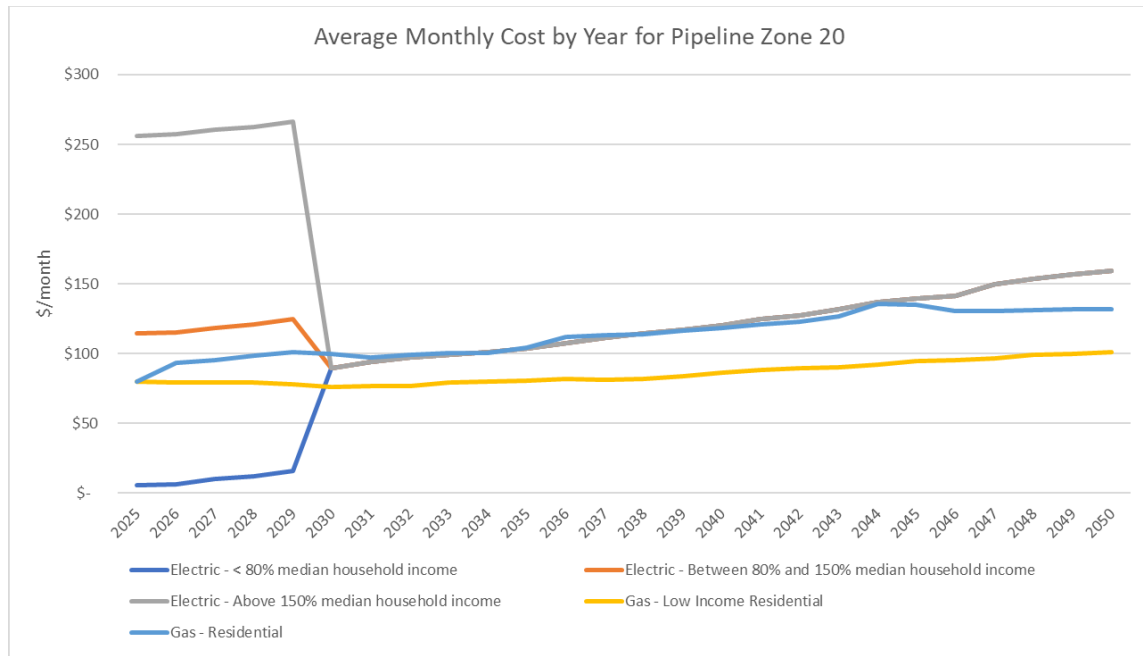
## Reference Case – Customer Perspective (Furnace Cost Reduction Included)

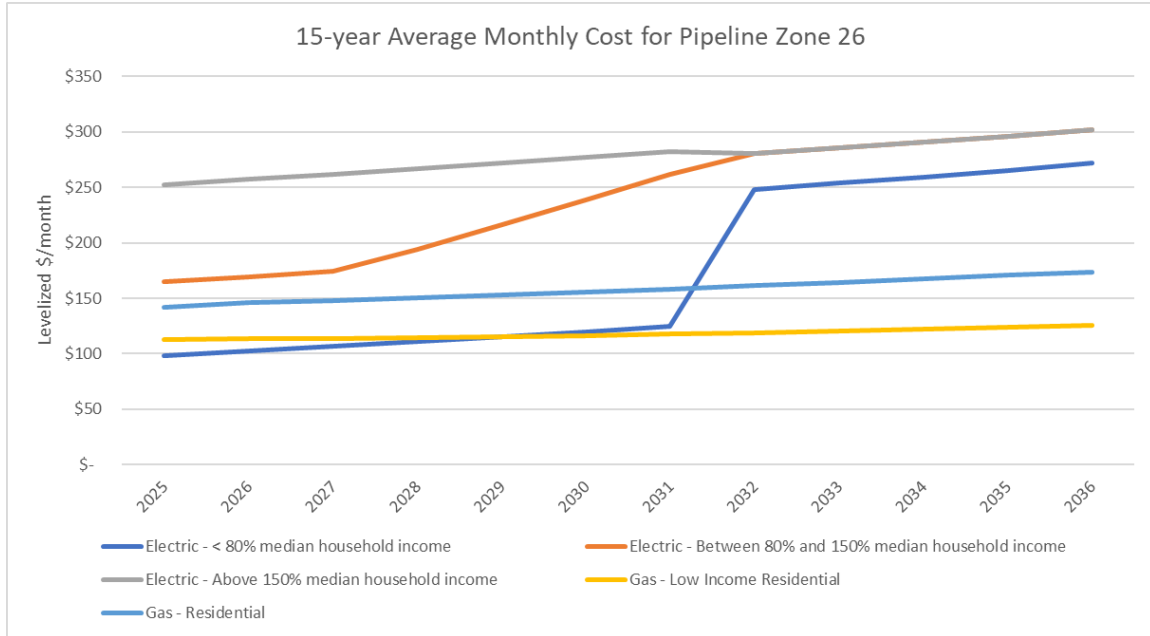
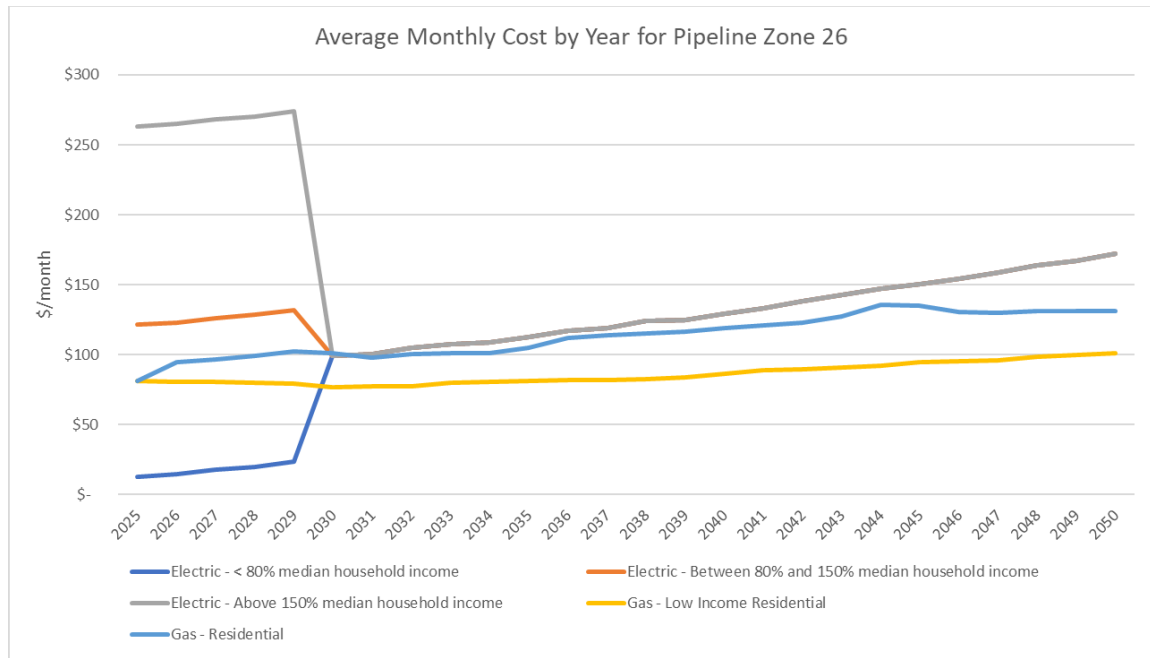
### Zone 10

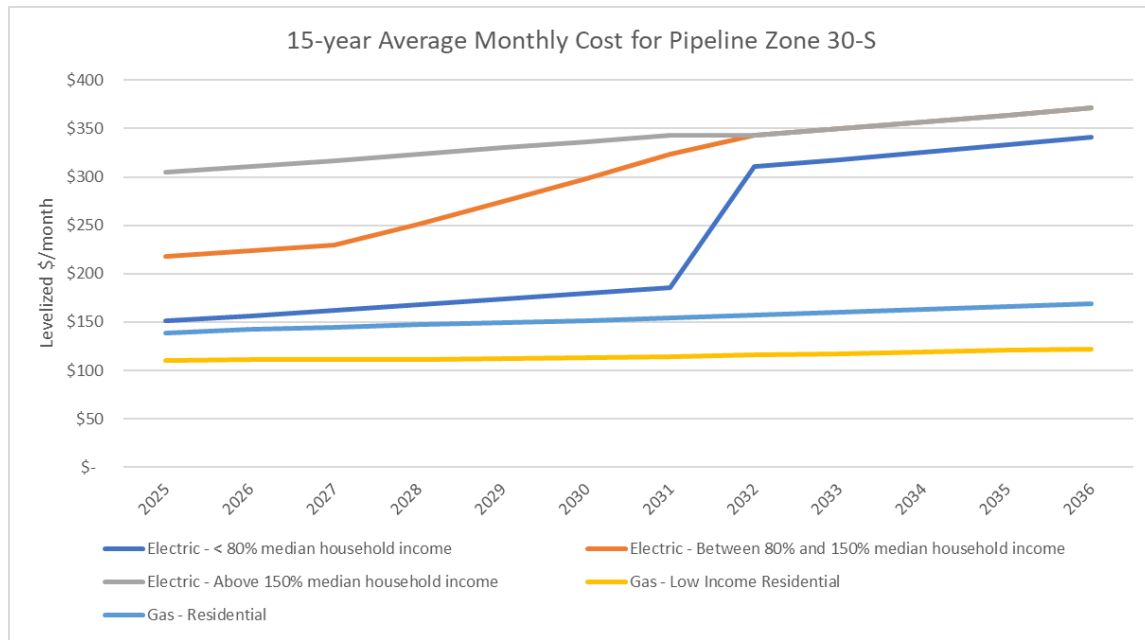
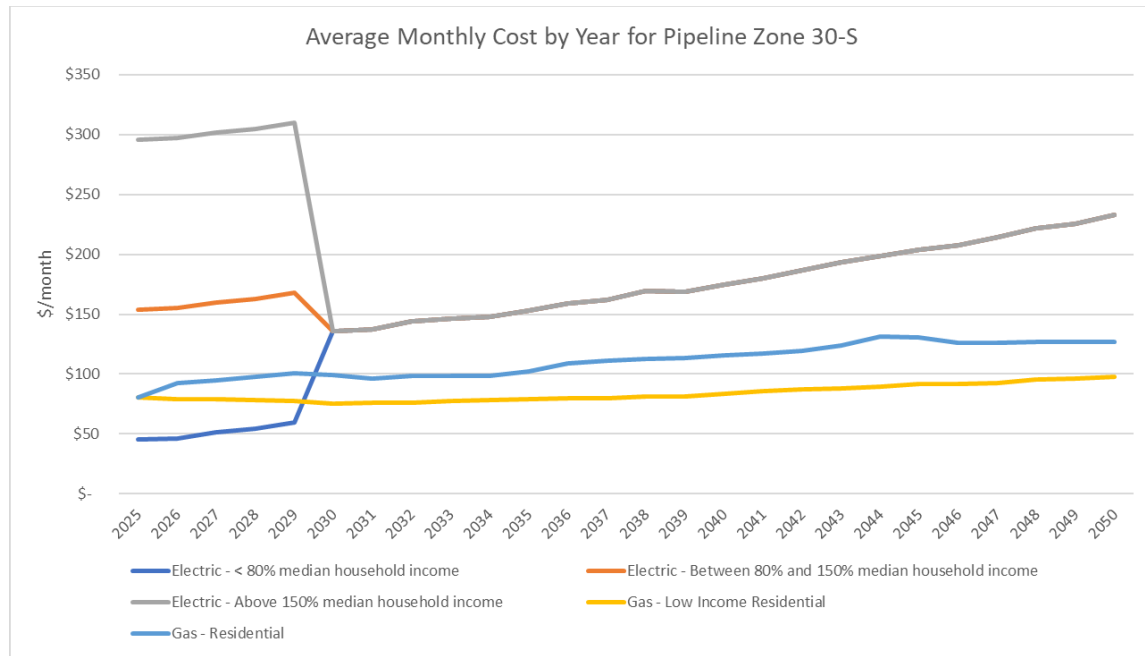


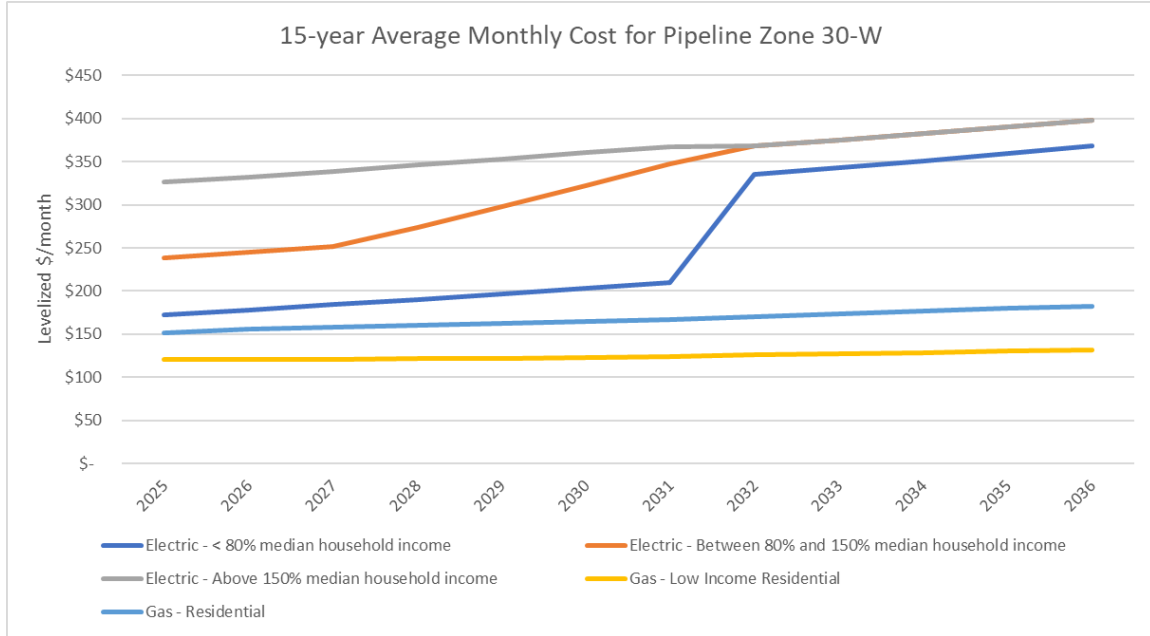
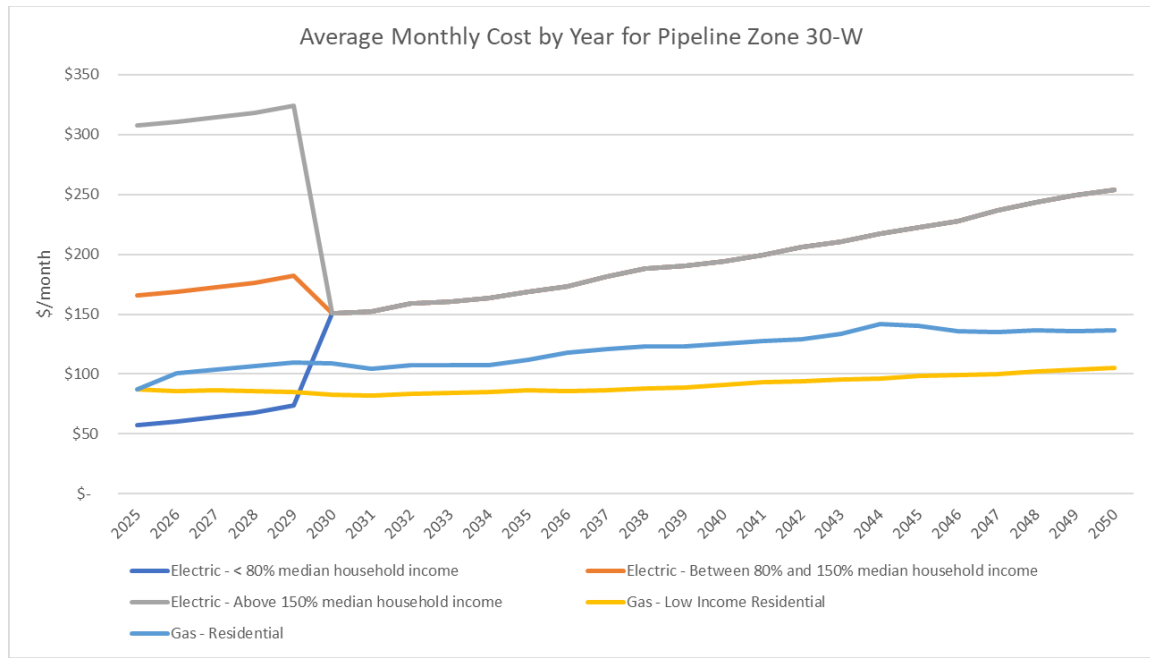


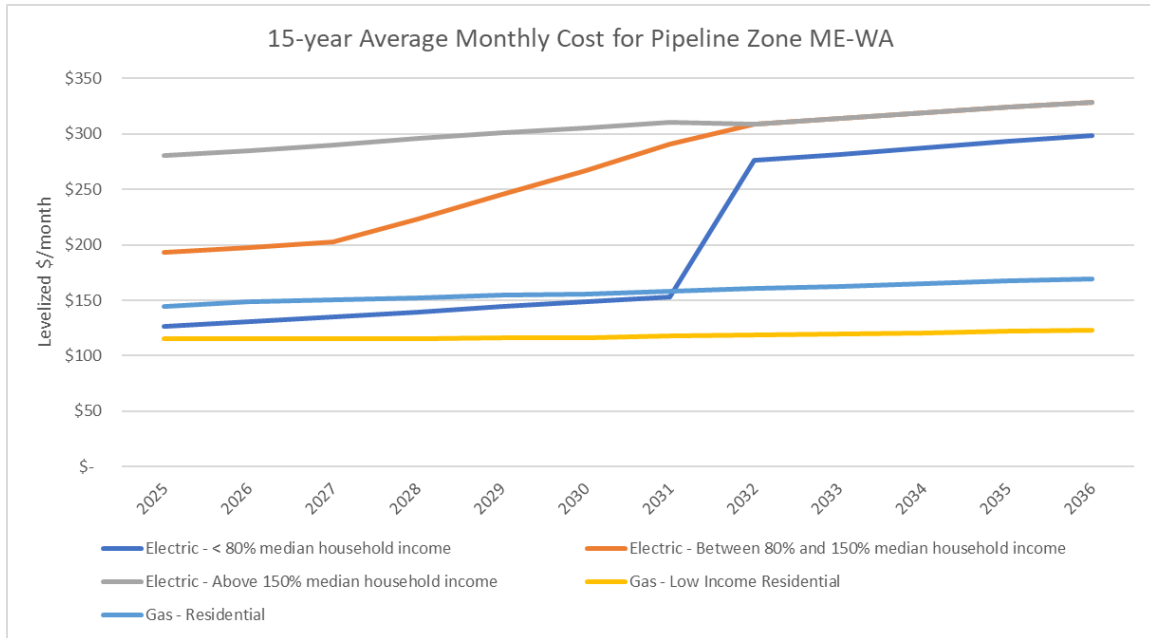
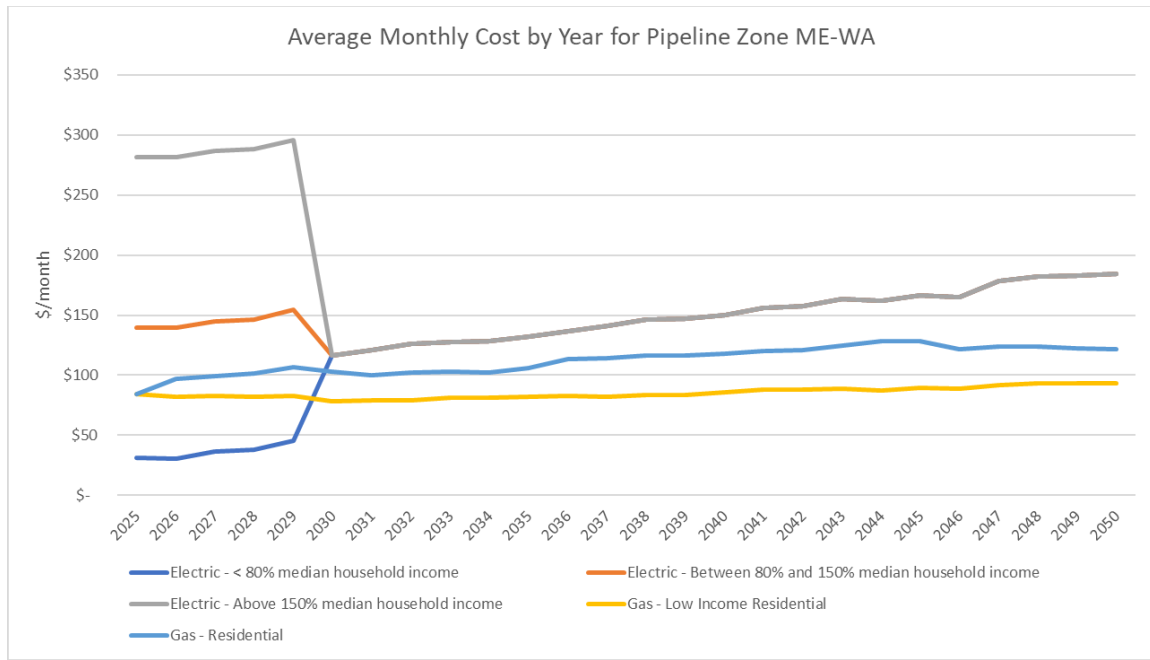
**Zone 11**

**Zone 20**

**Zone 26**

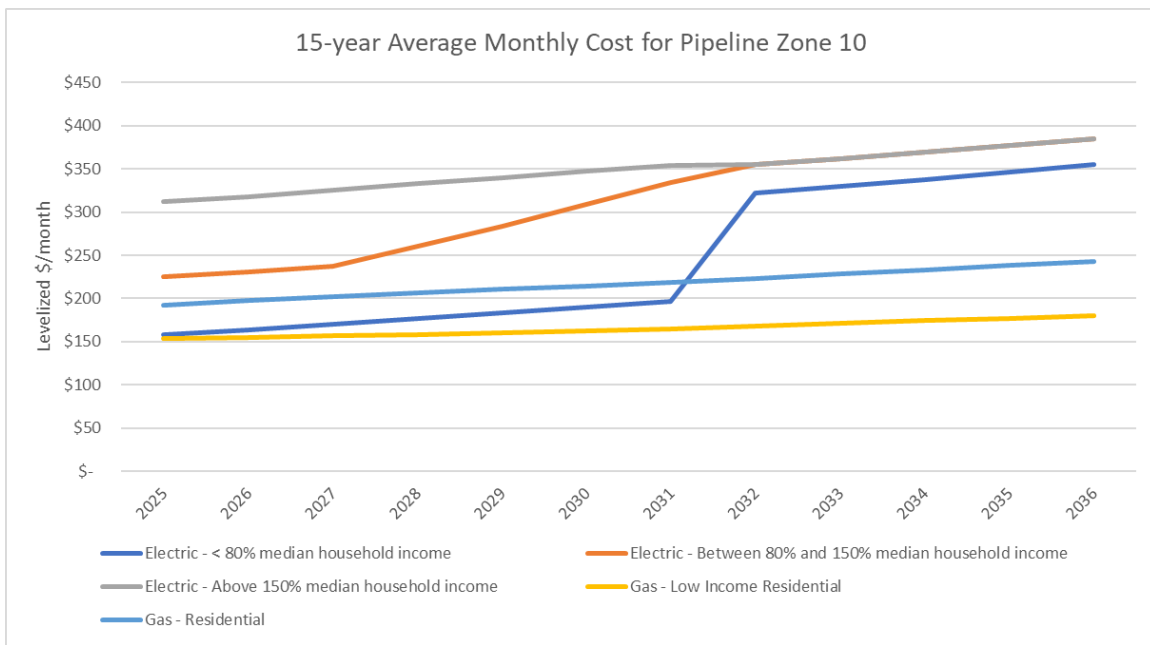
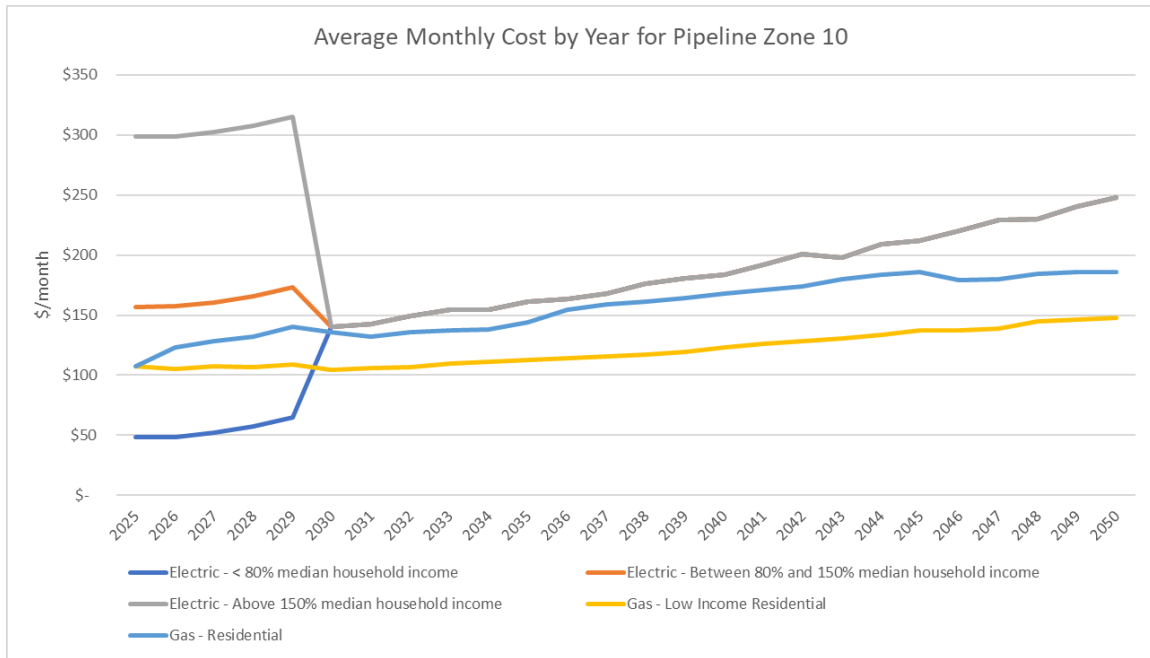
**Zone 30-S**

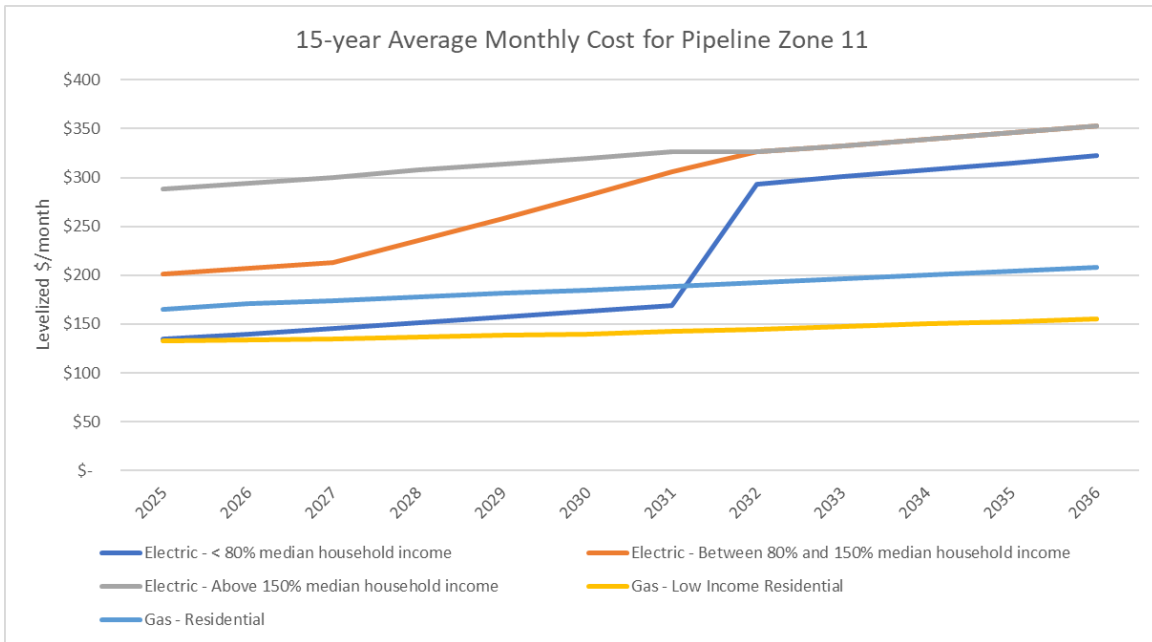
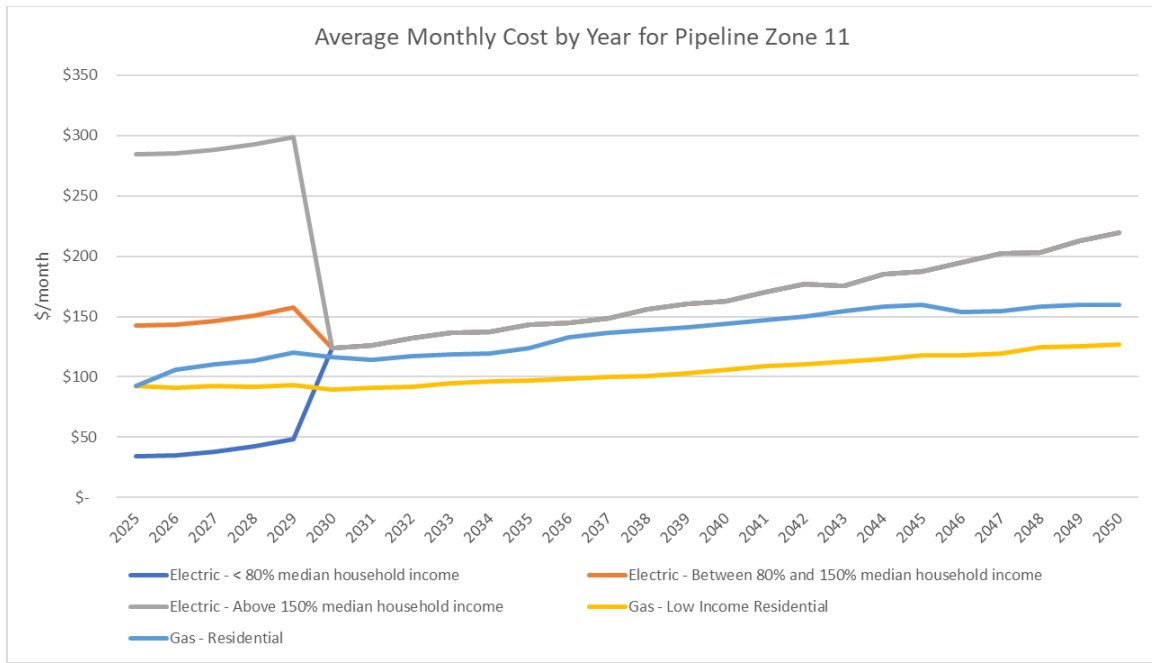
**Zone 30-W**

**Zone ME-WA**

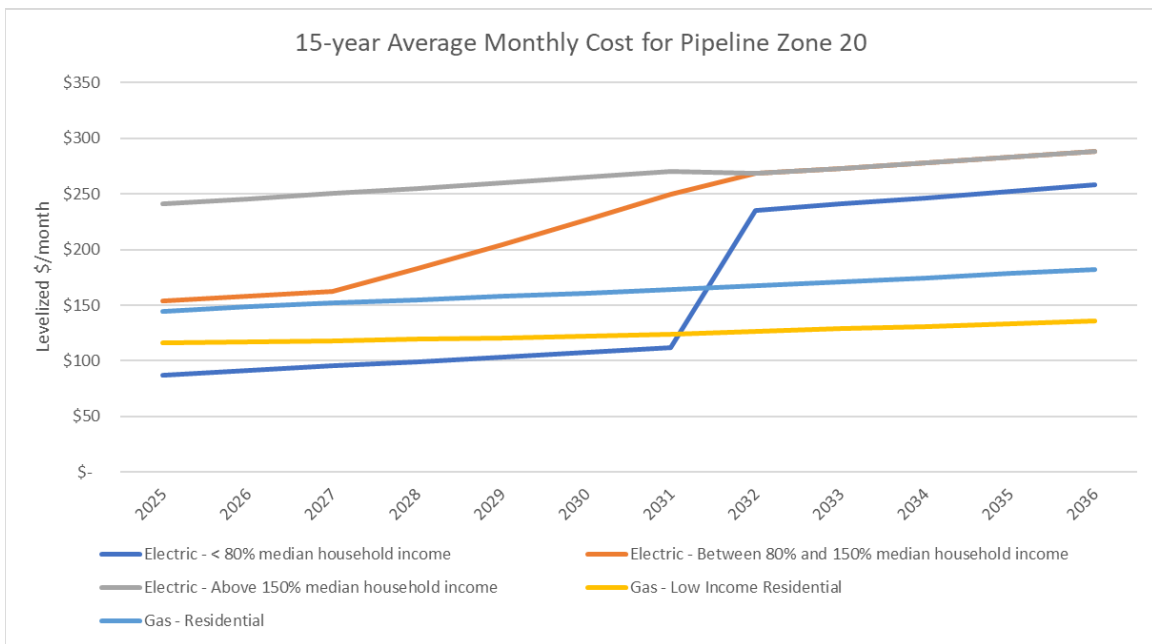
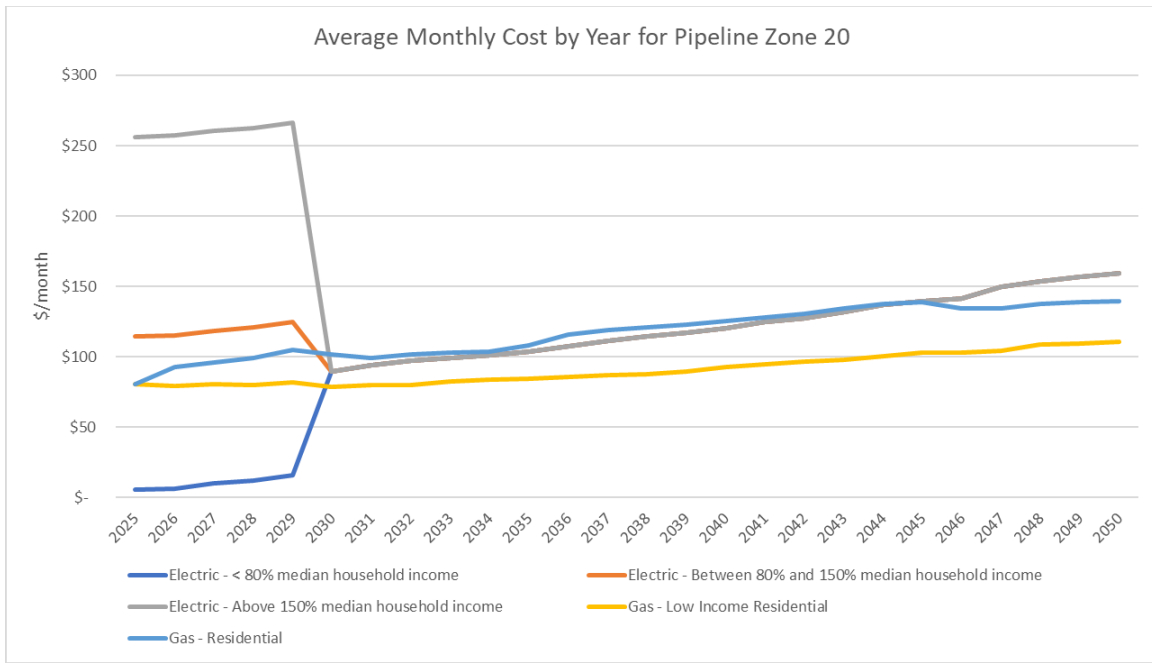
## Low Growth Case - Customer Perspective (Furnace Cost Reduction Included)

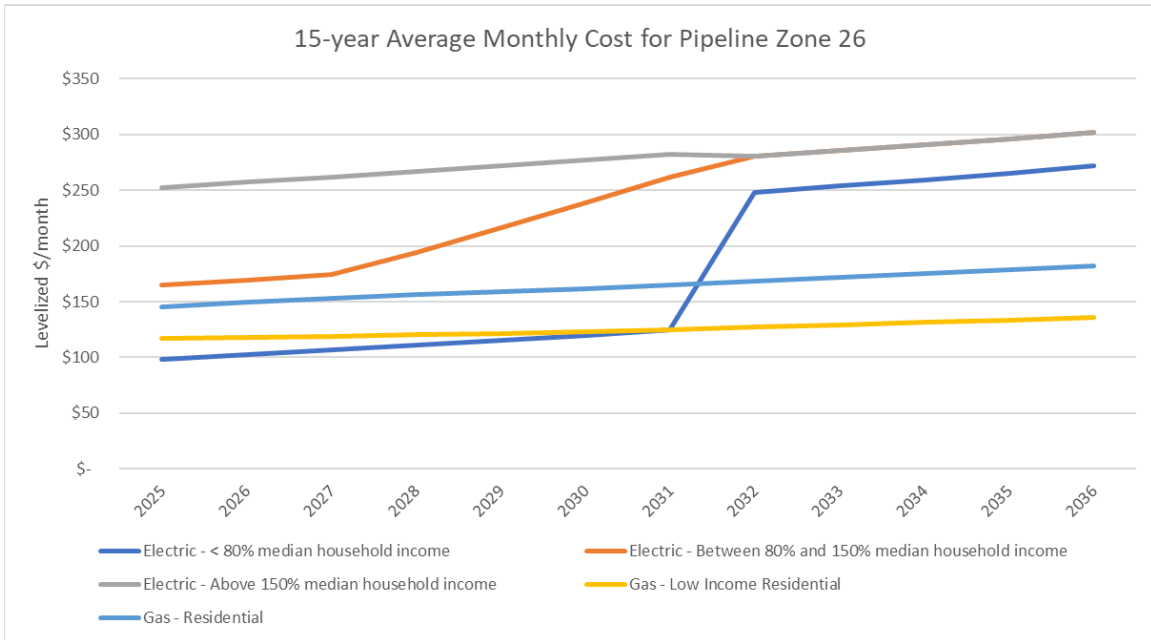
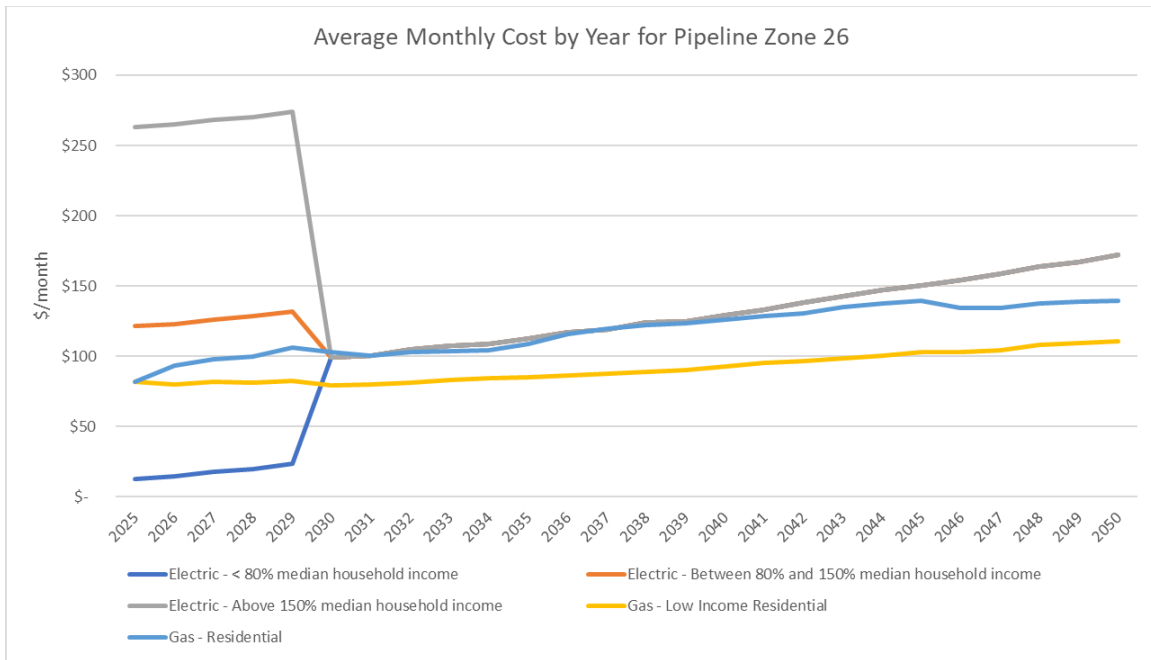
### Zone 10

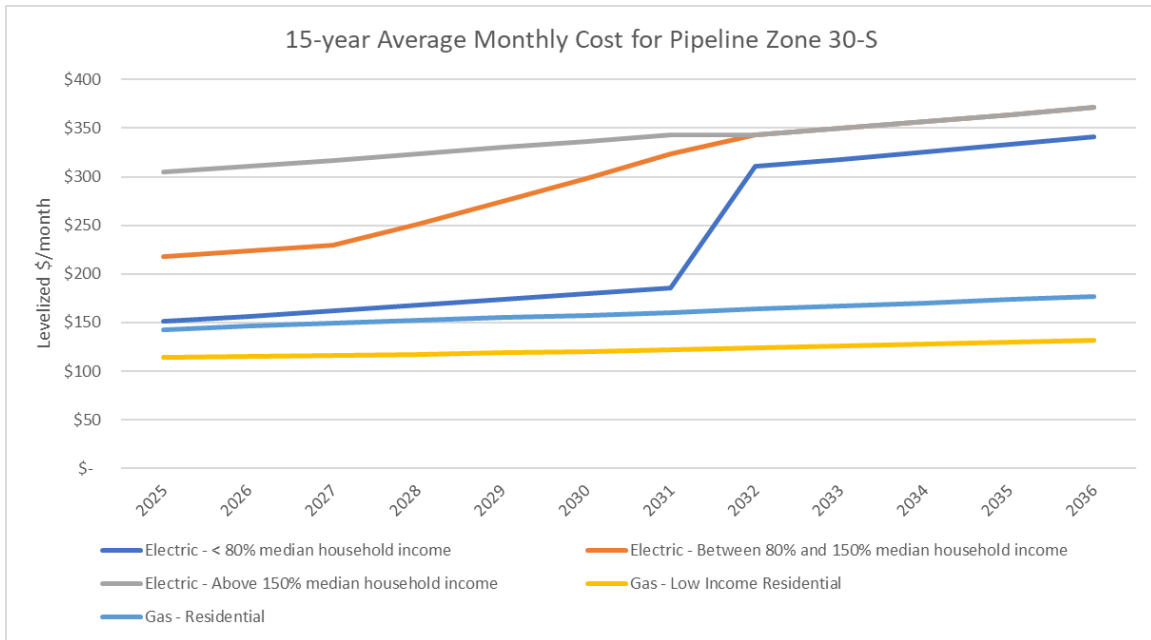
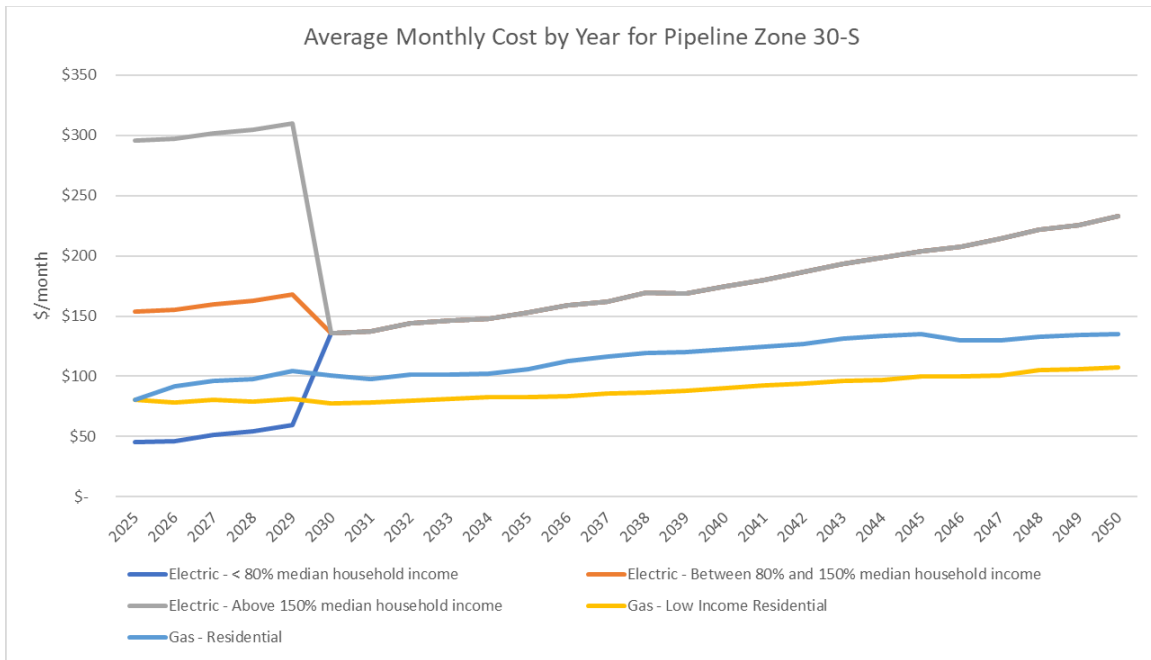


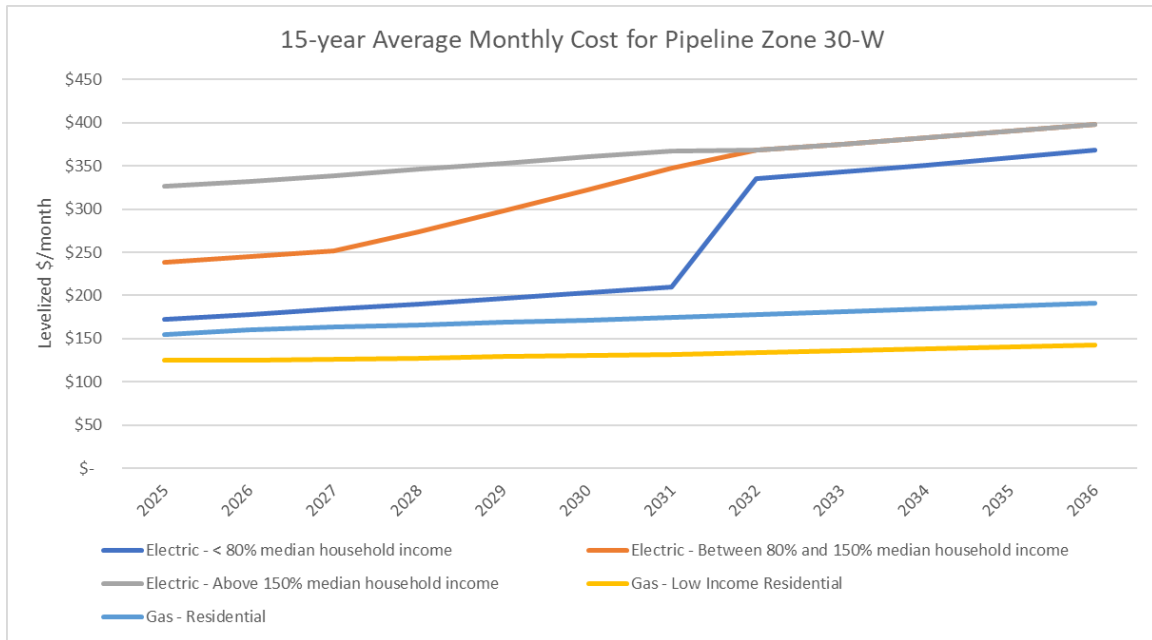
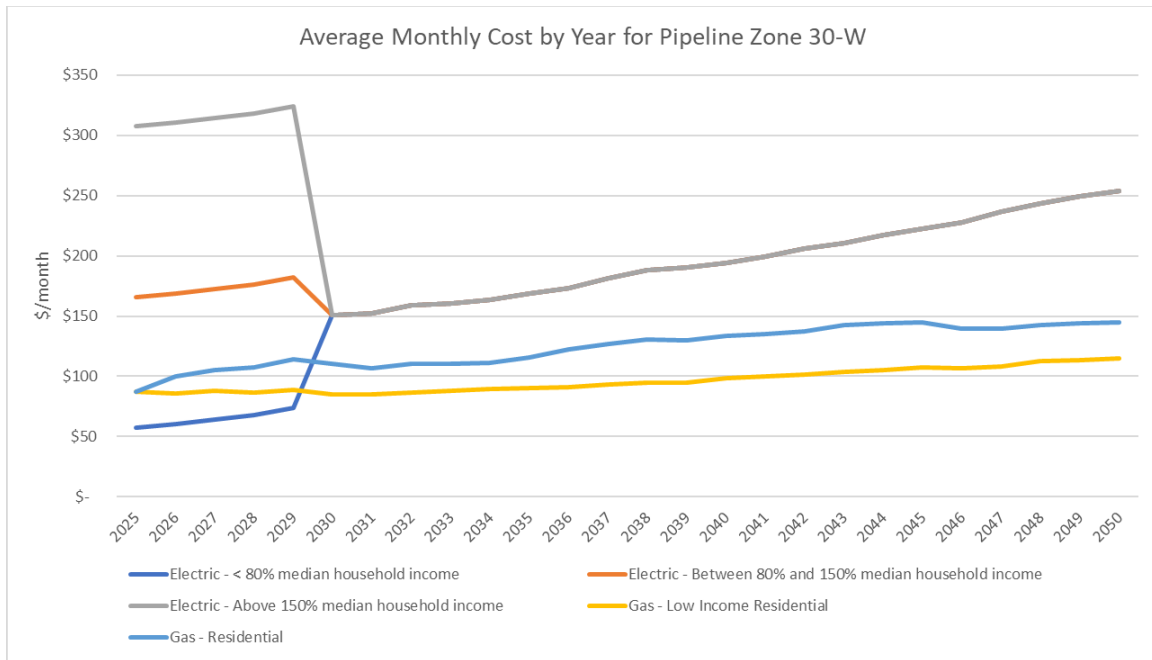
**Zone 11**

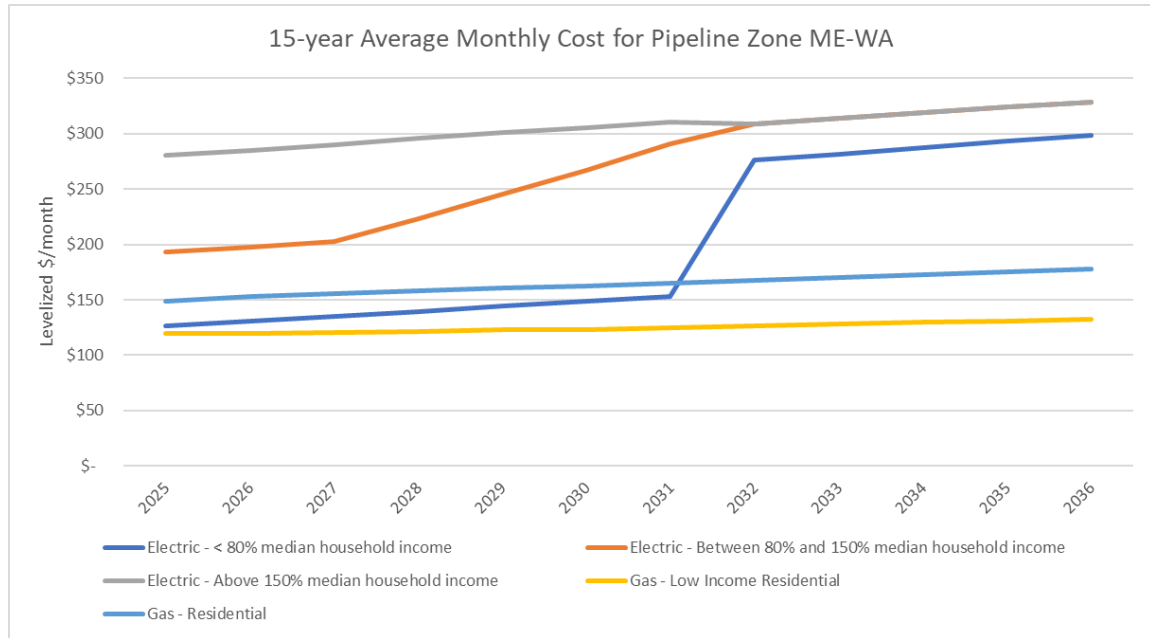
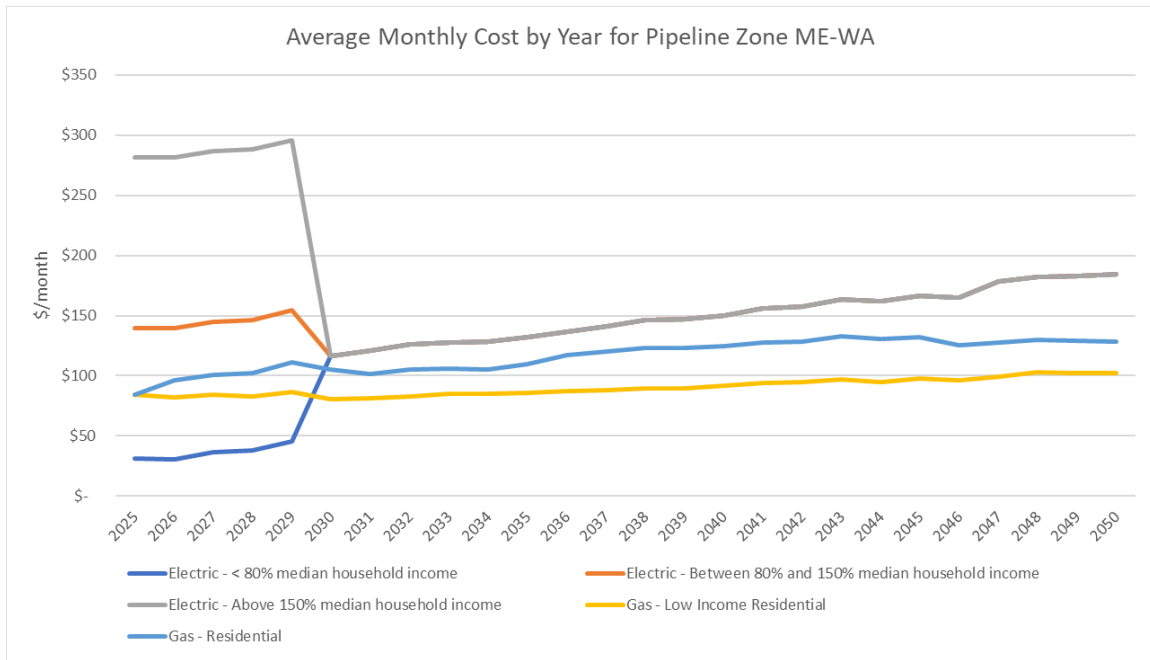


**Zone 20**

**Zone 26**

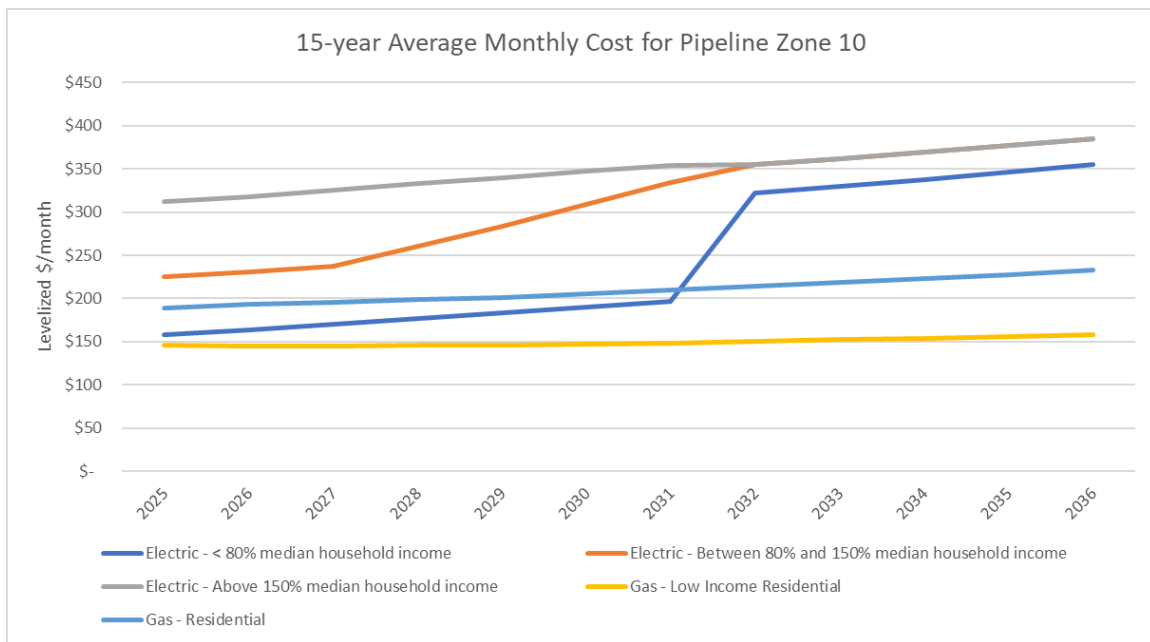
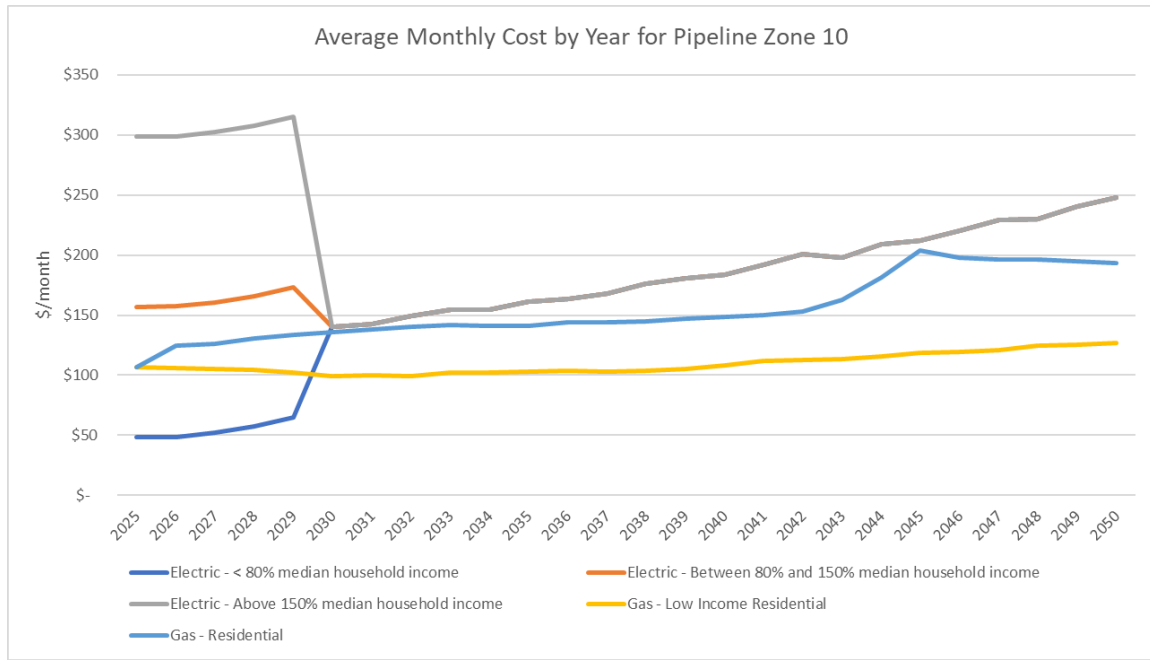
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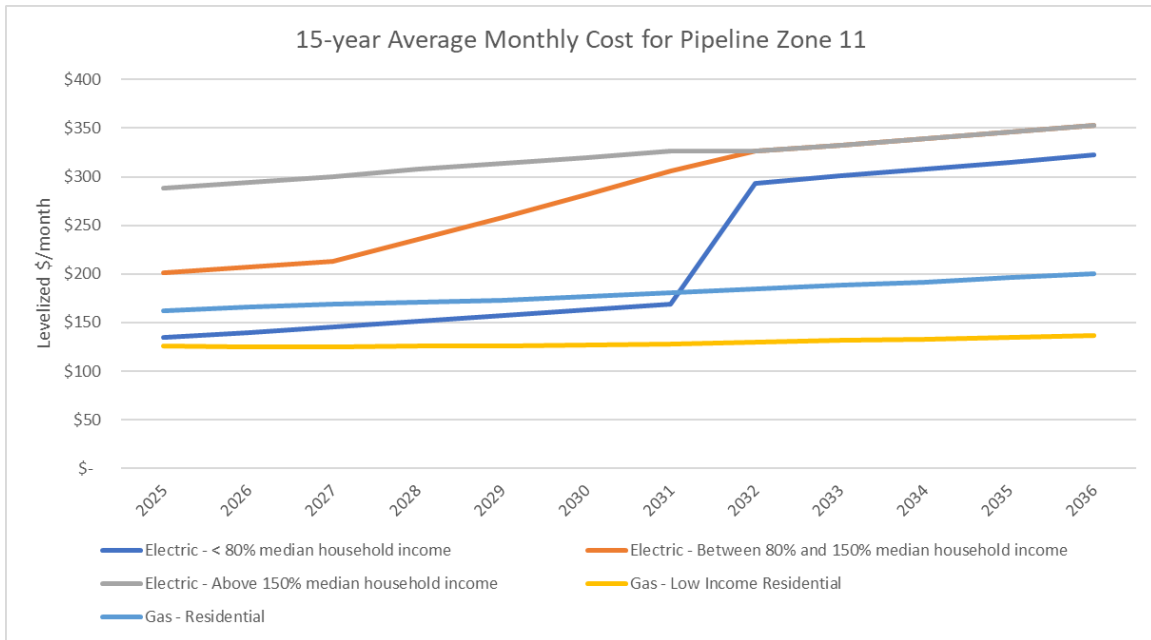
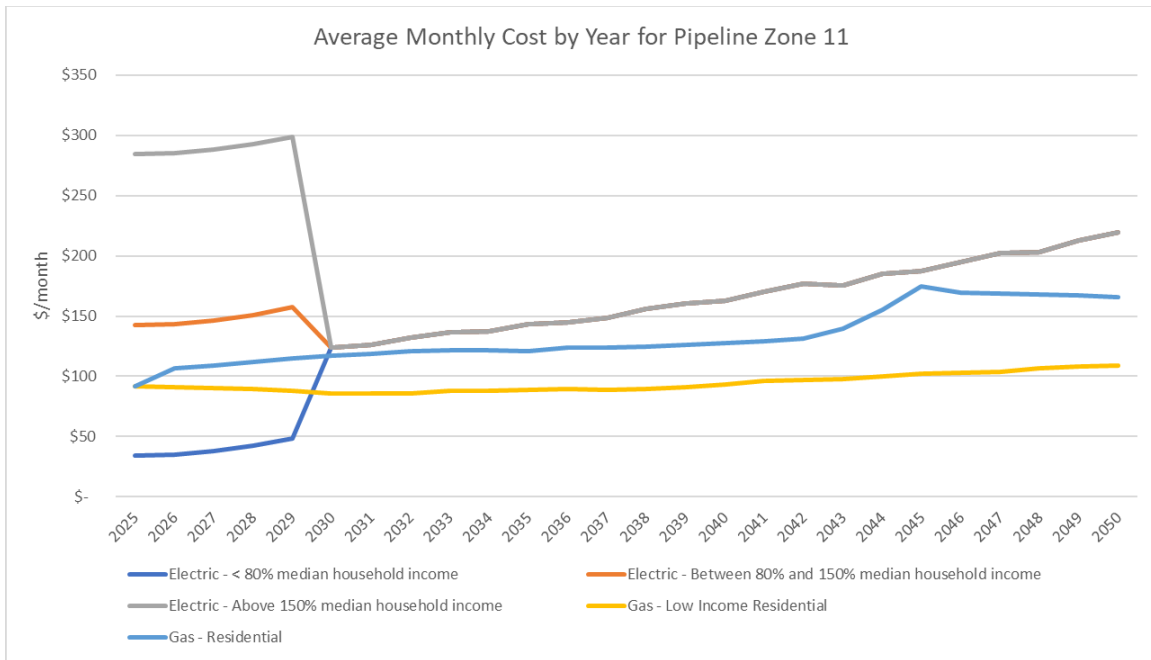
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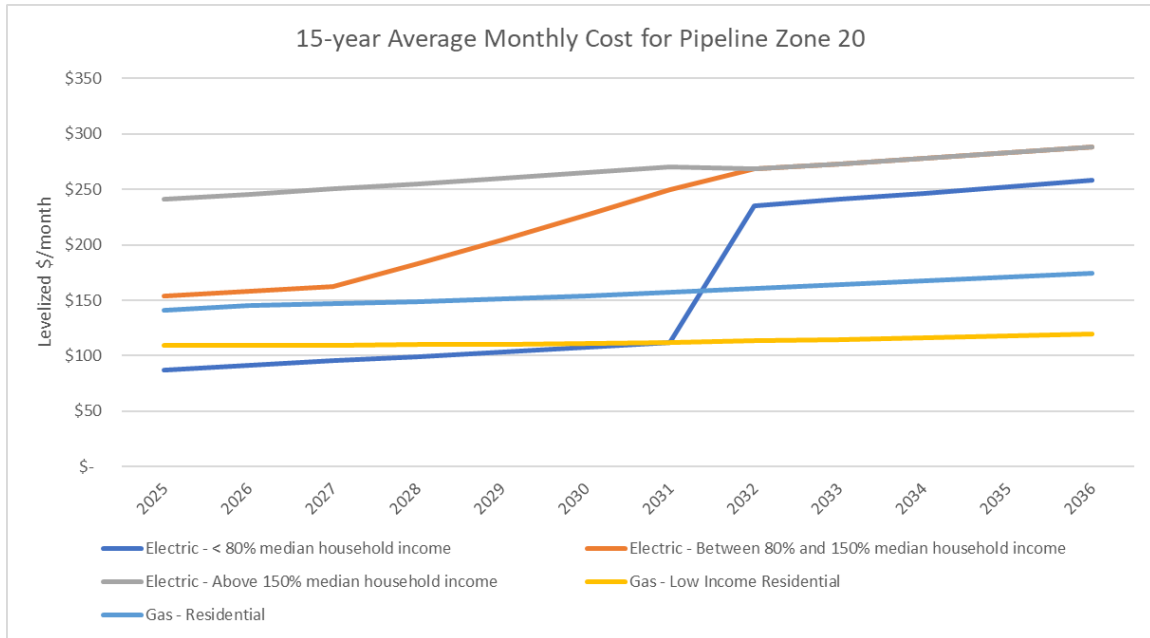
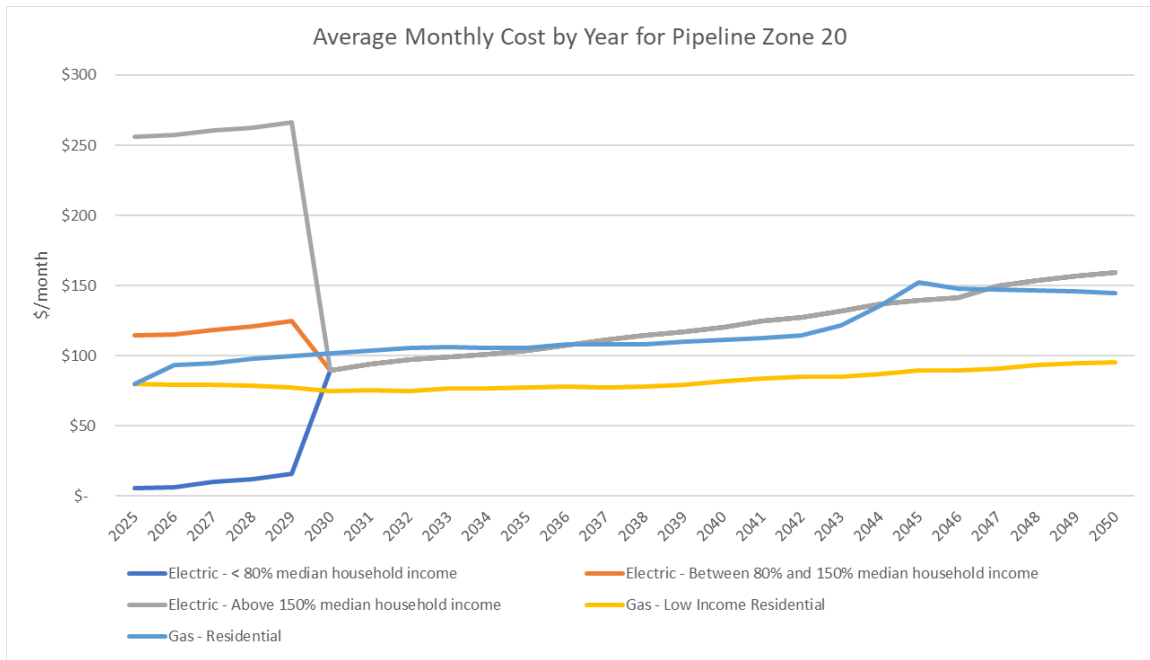
**Zone ME-WA**

## High Growth Case - Customer Perspective (Furnace Cost Reduction Included)

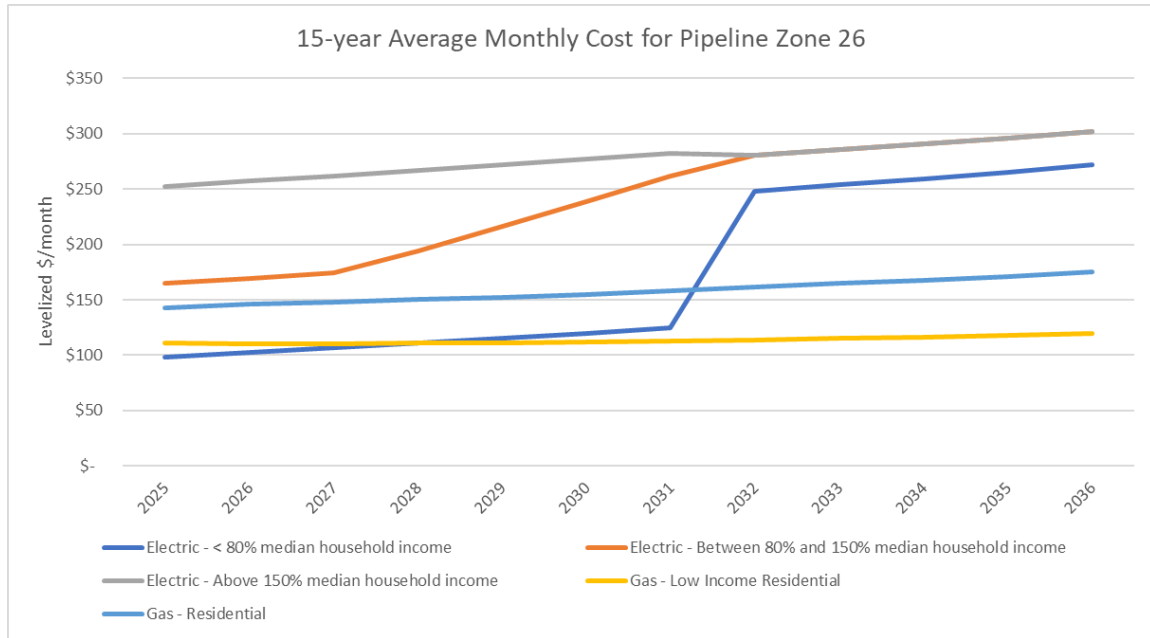
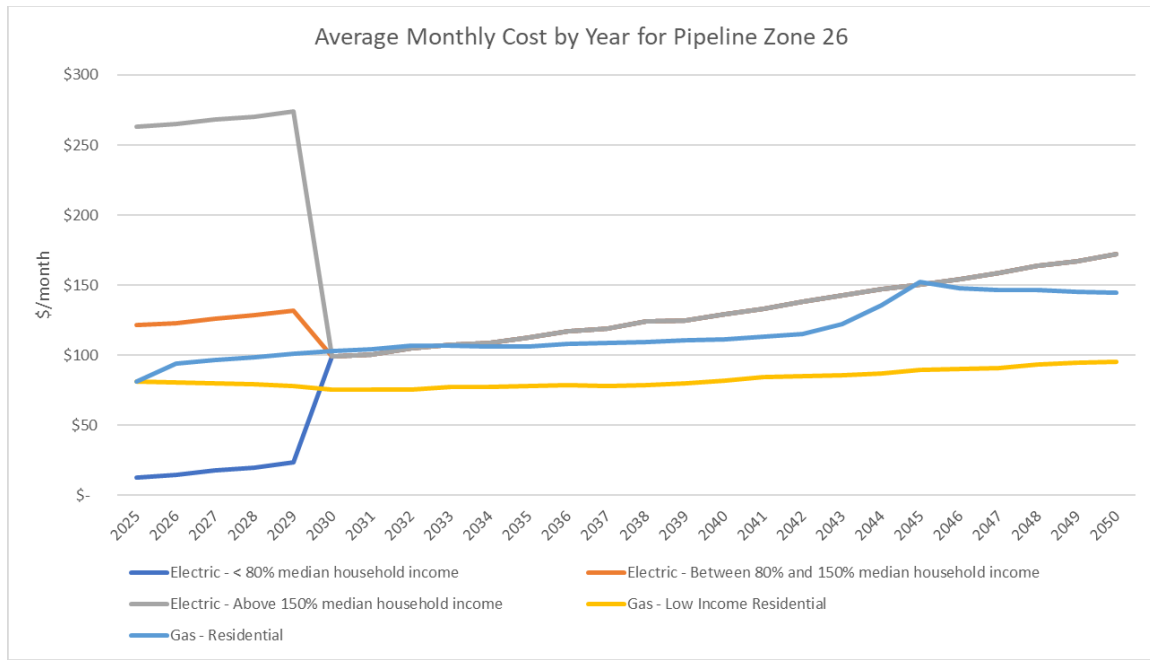
### Zone 10

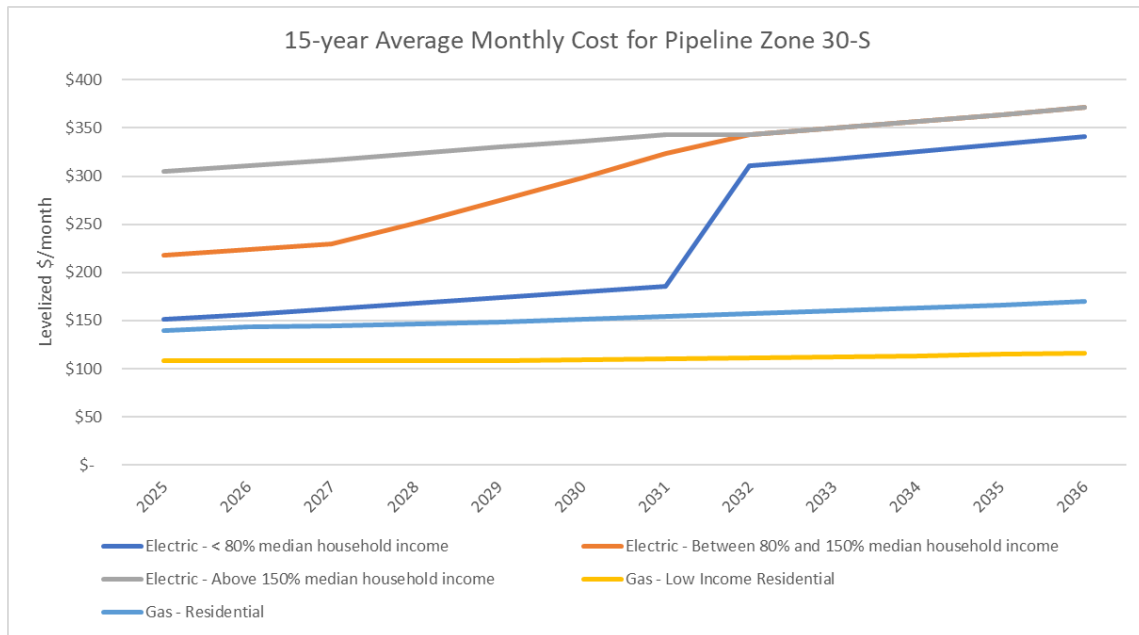
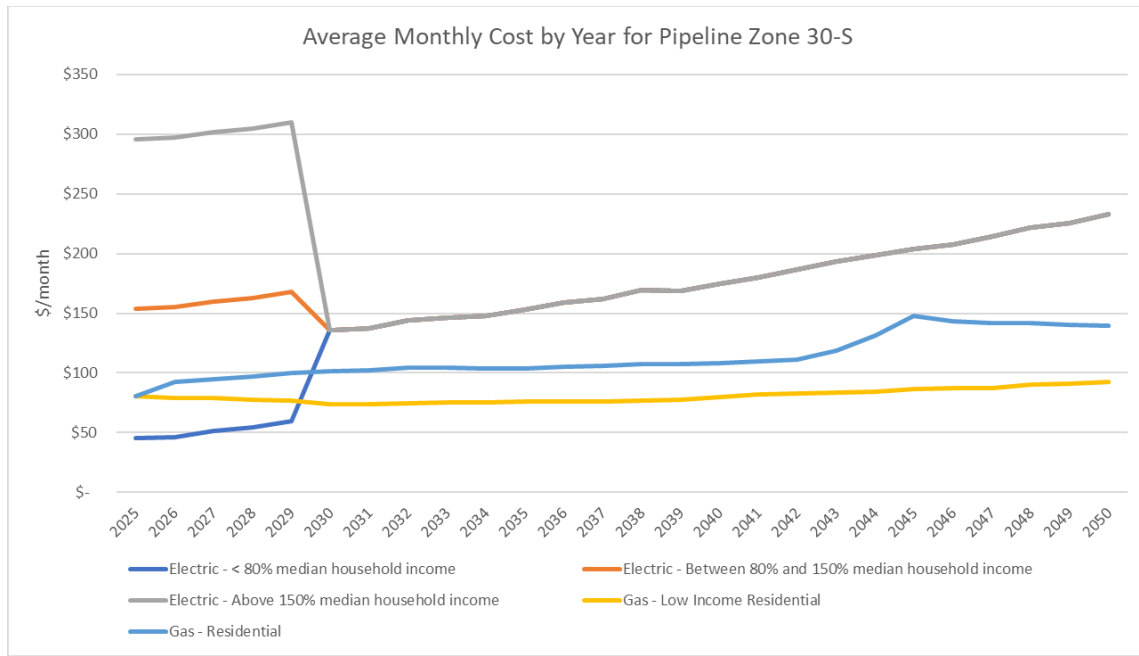


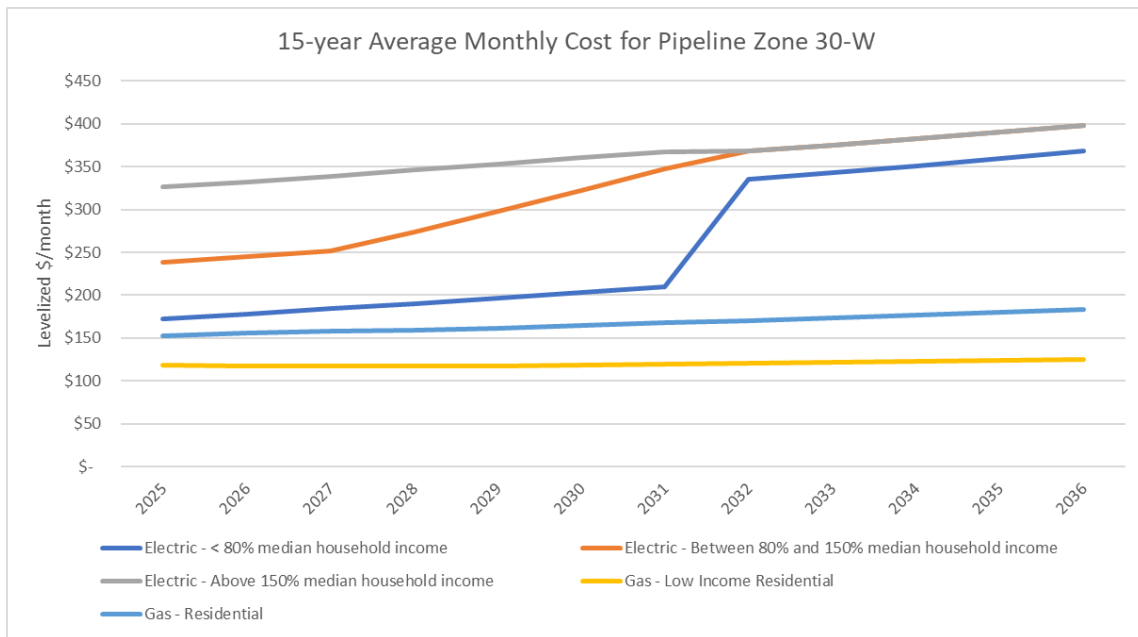
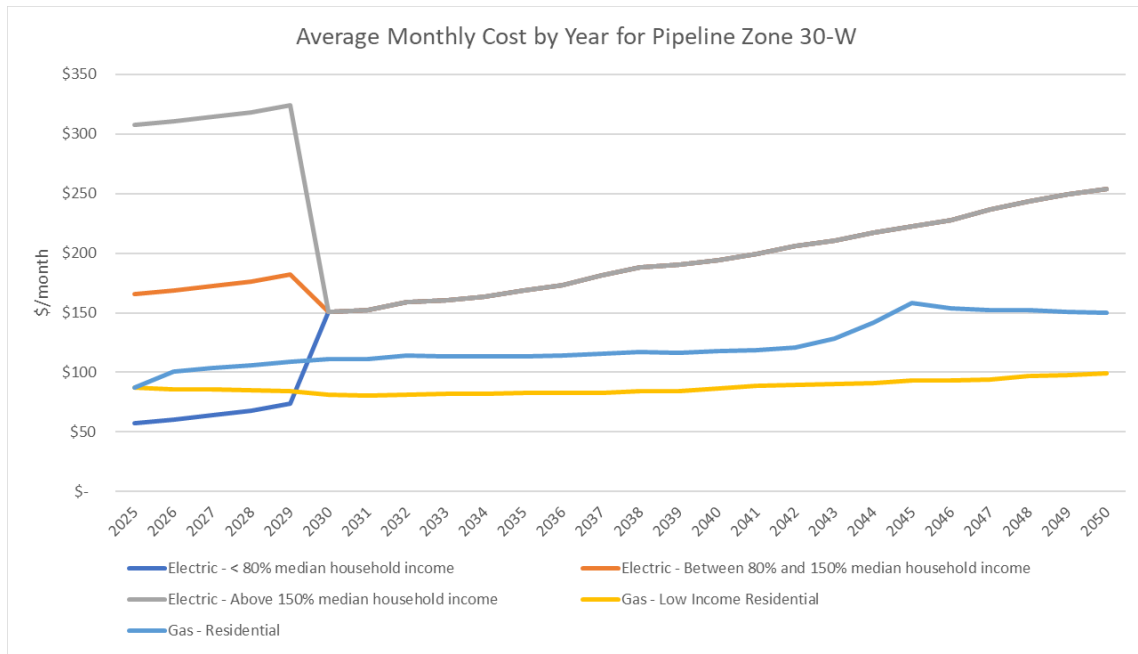
**Zone 11**

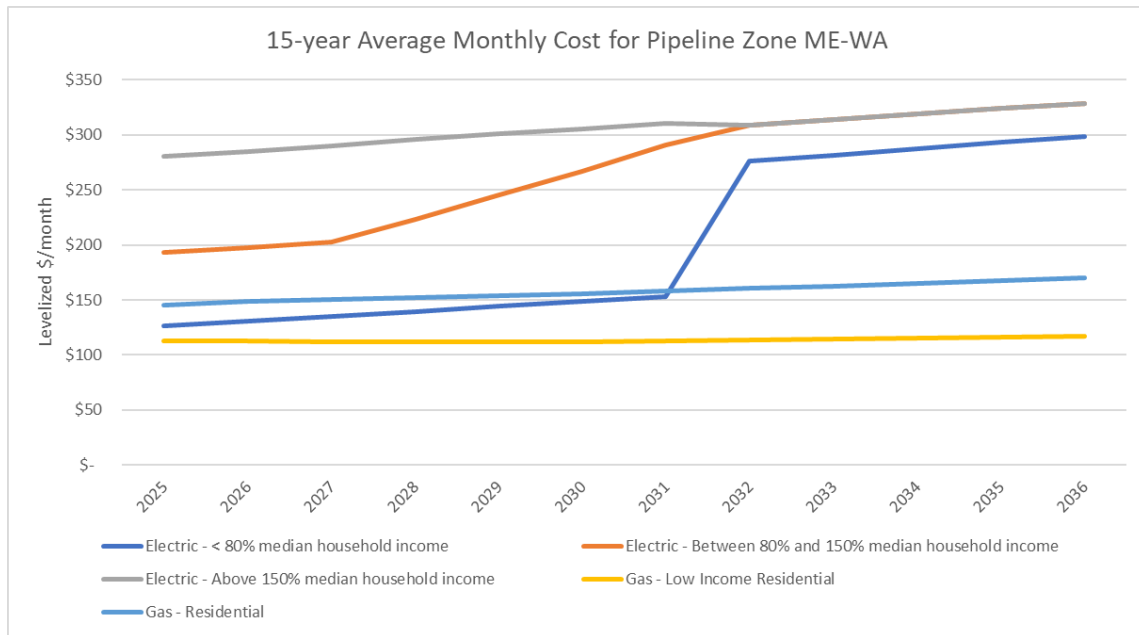
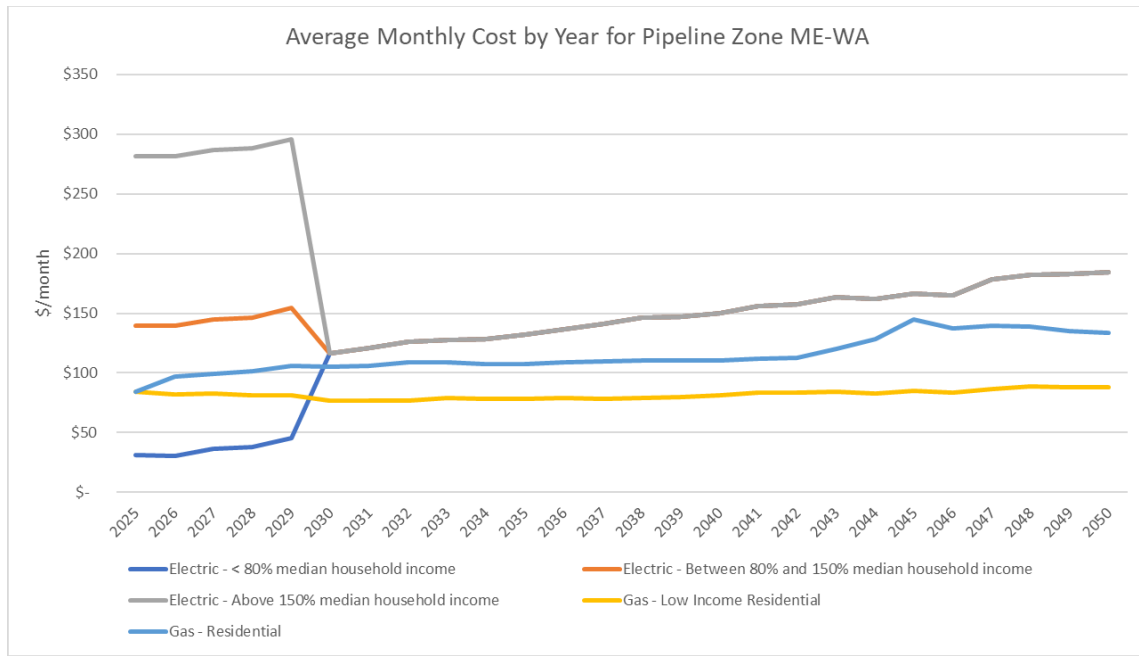
**Zone 20**



**Zone 26**

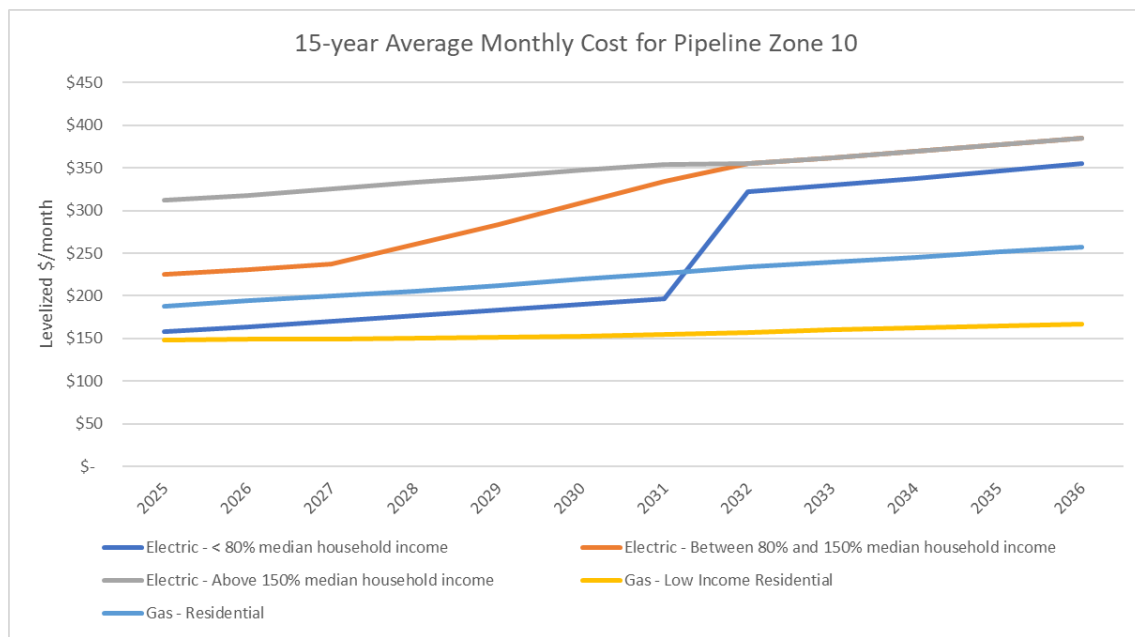
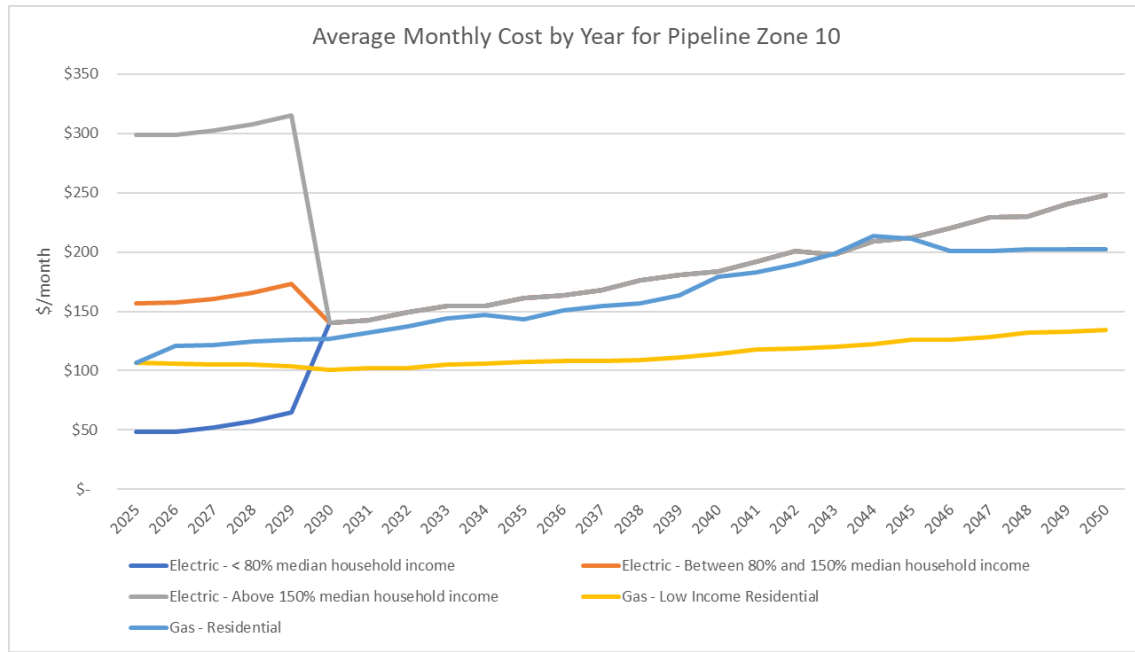
**Zone 30-S**

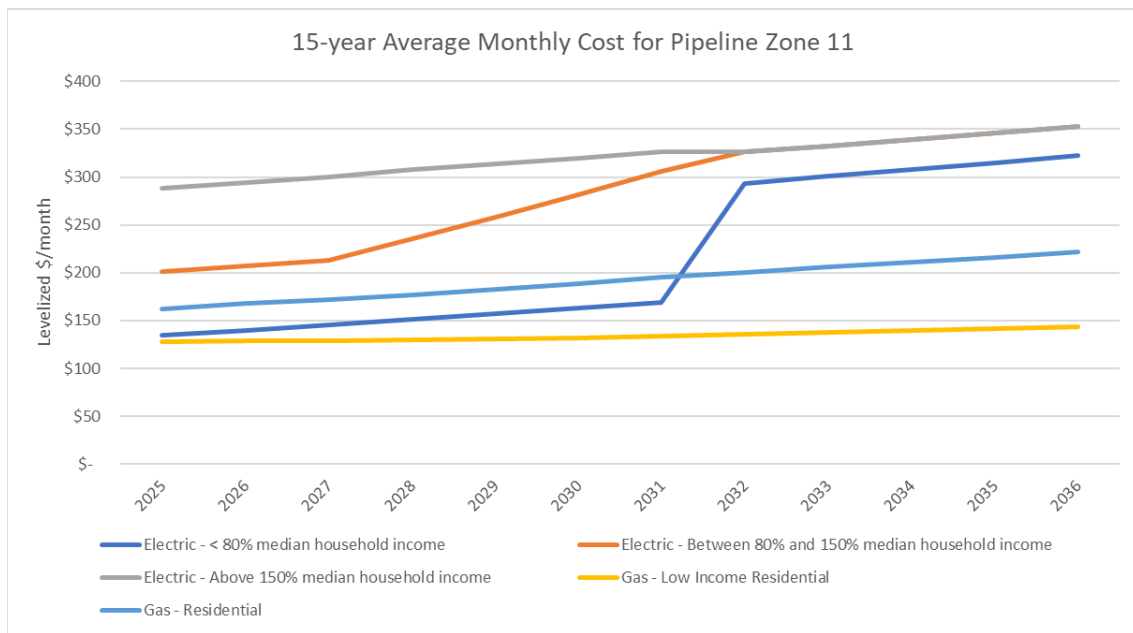
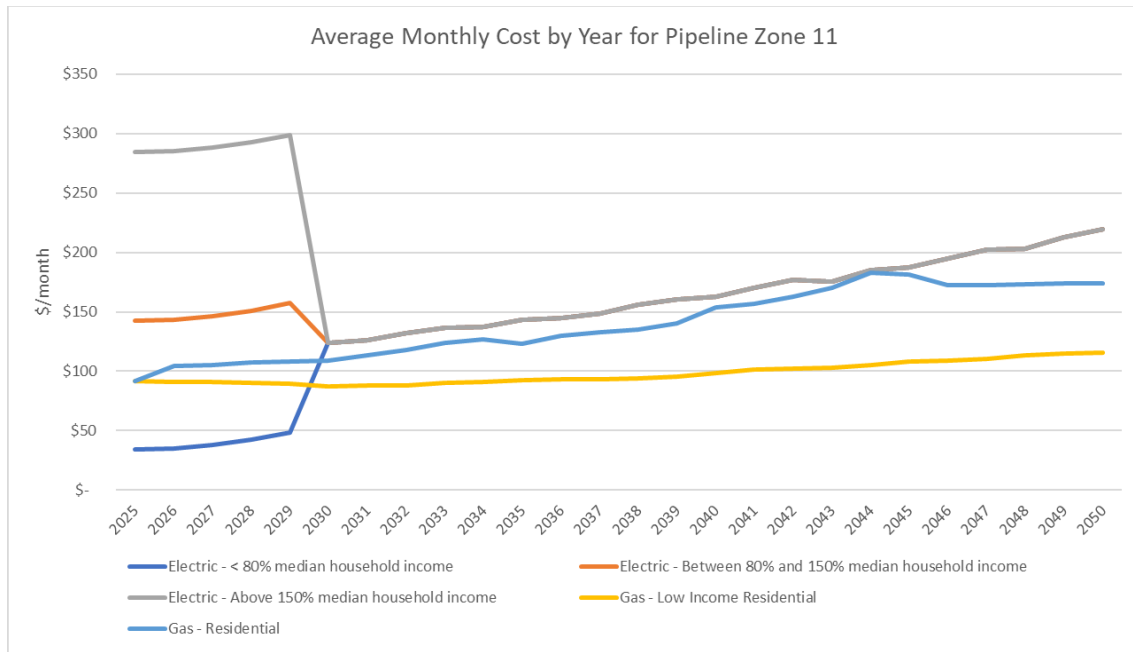
**Zone 30-W**

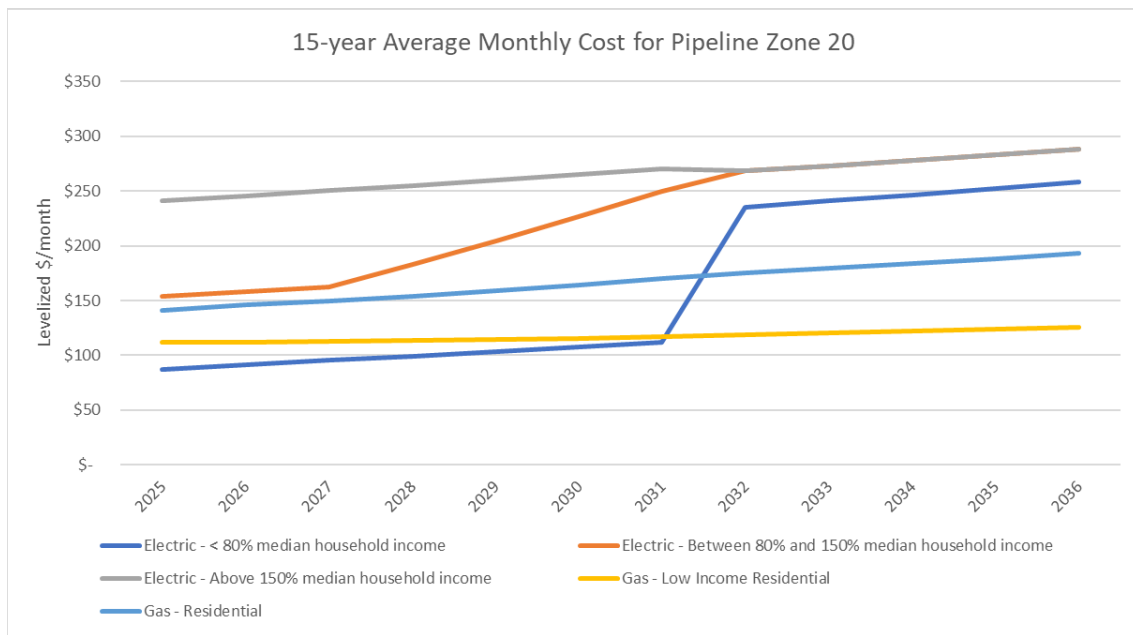
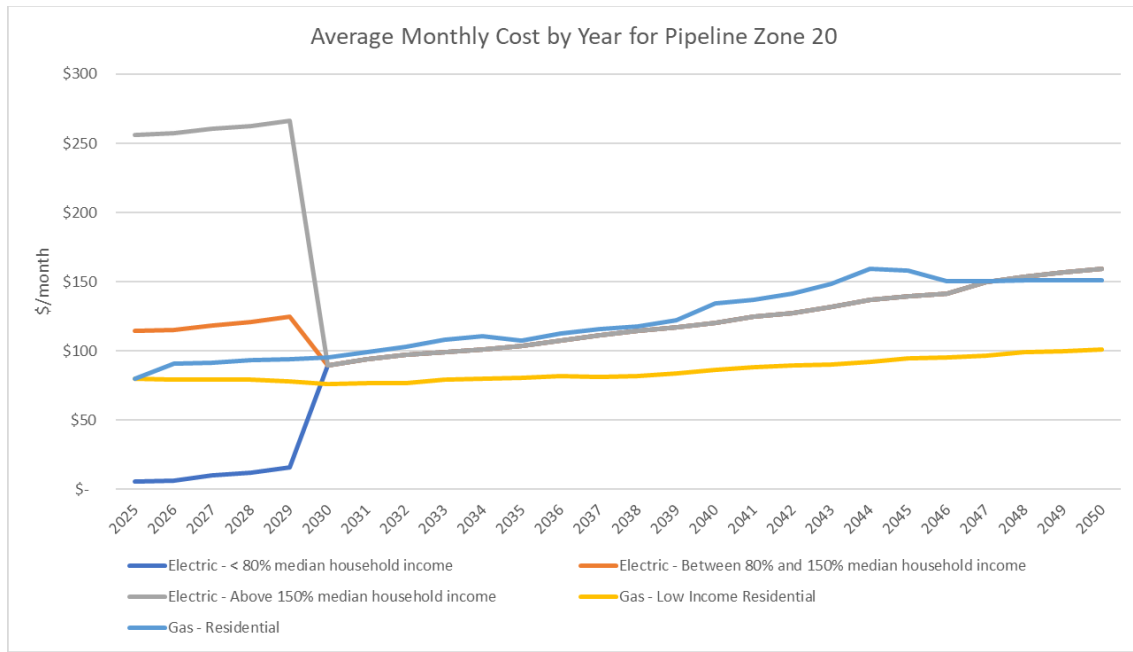
**Zone ME-WA**

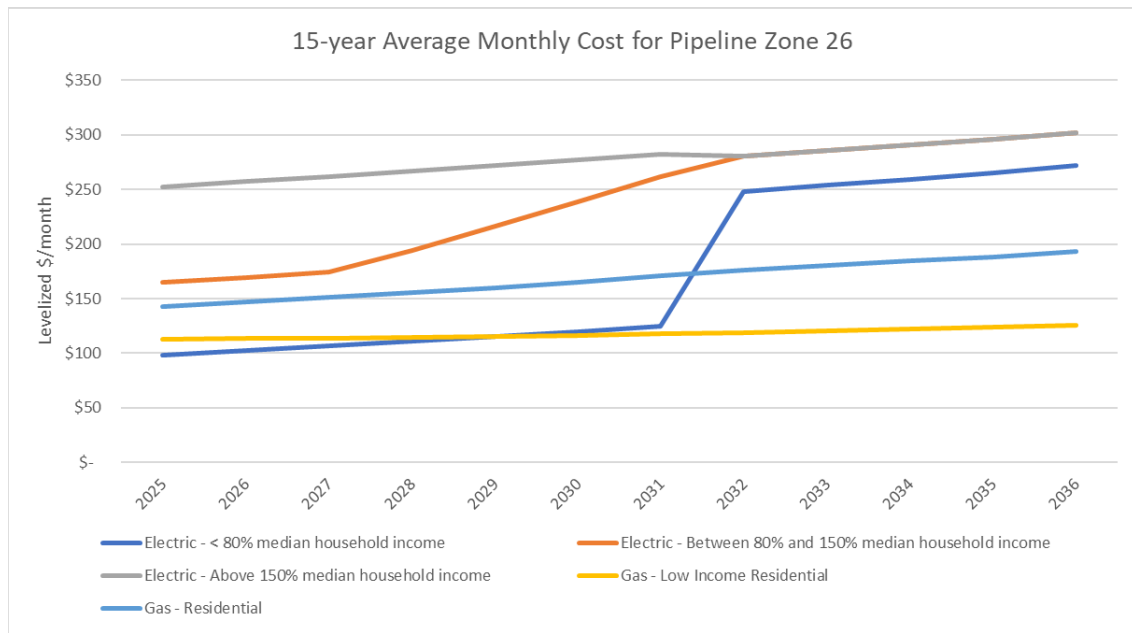
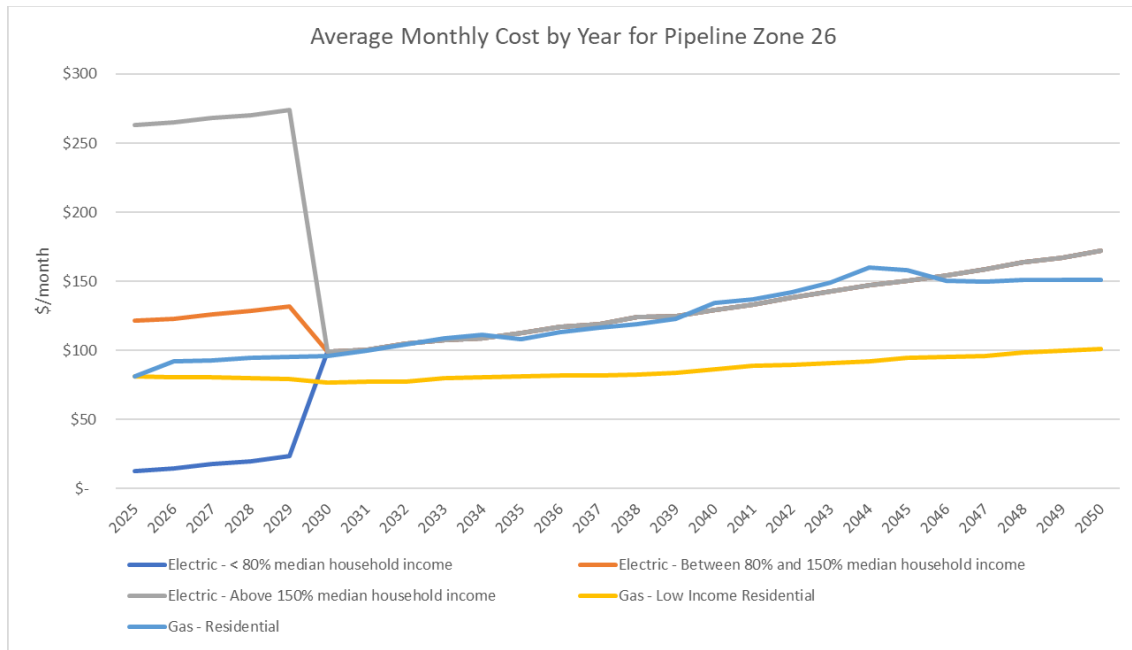
## Monte Carlo Simulations - Customer Perspective (Furnace Cost Reduction Included)

### Zone 10

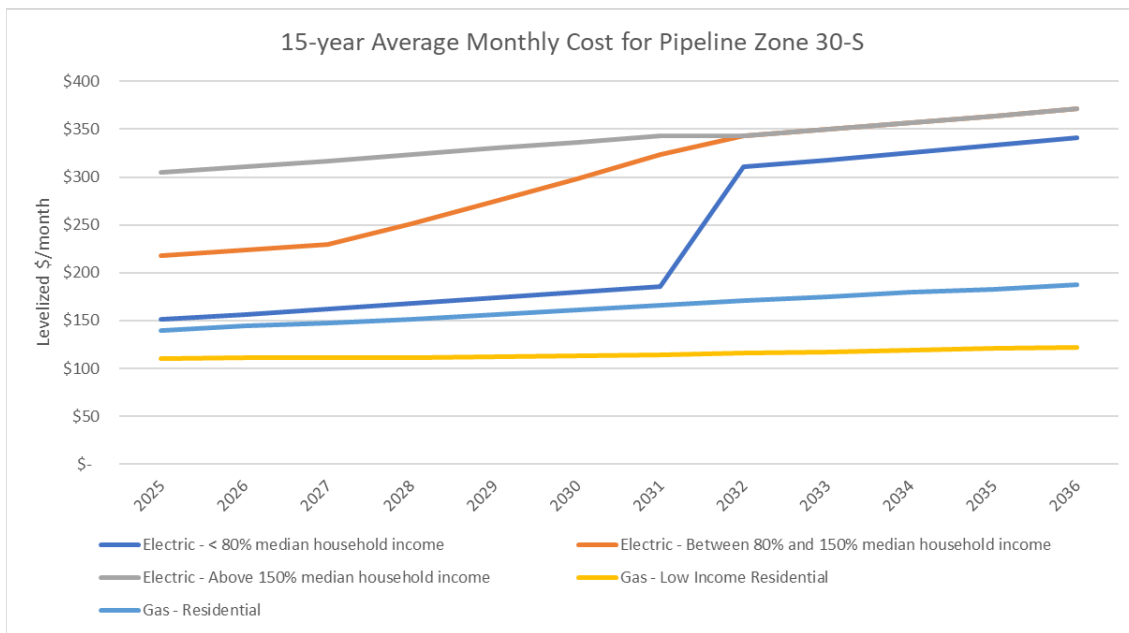
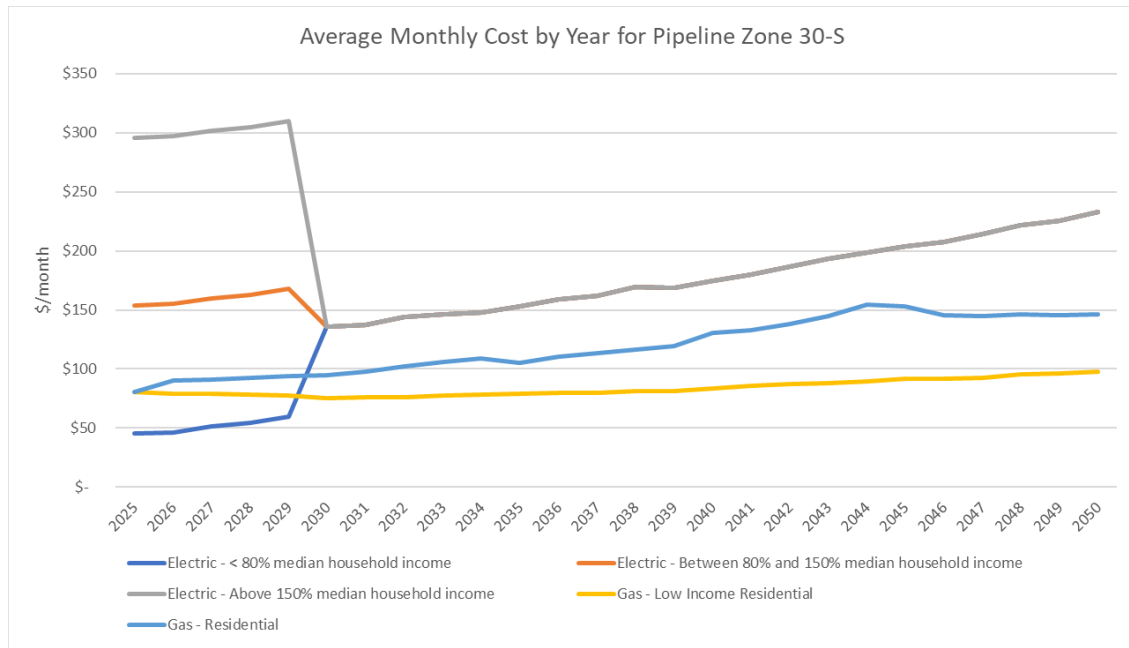


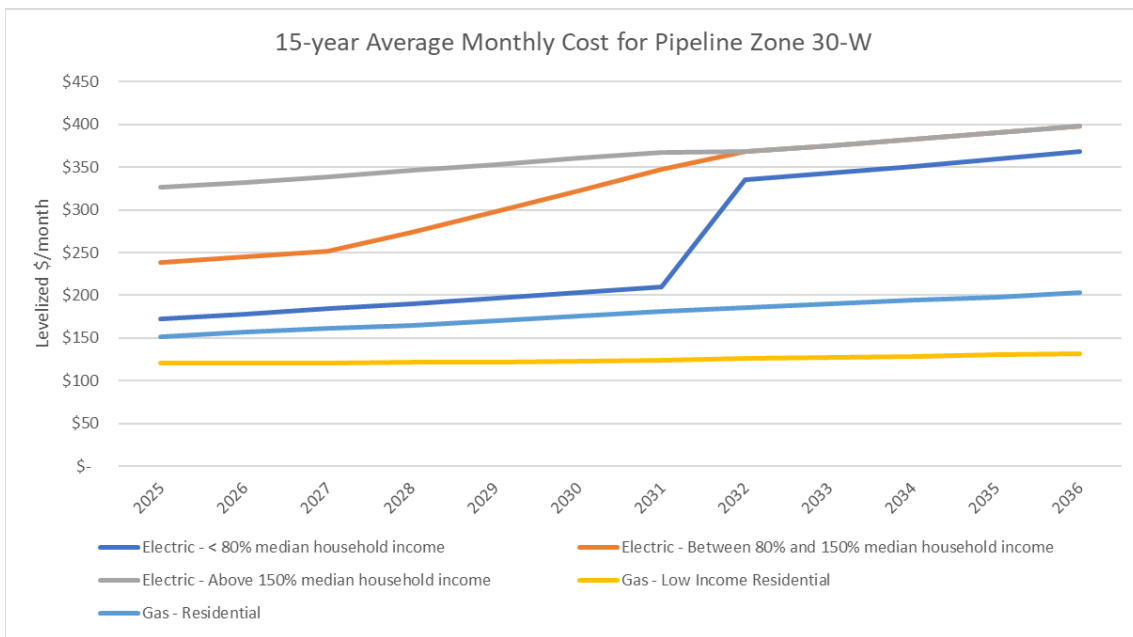
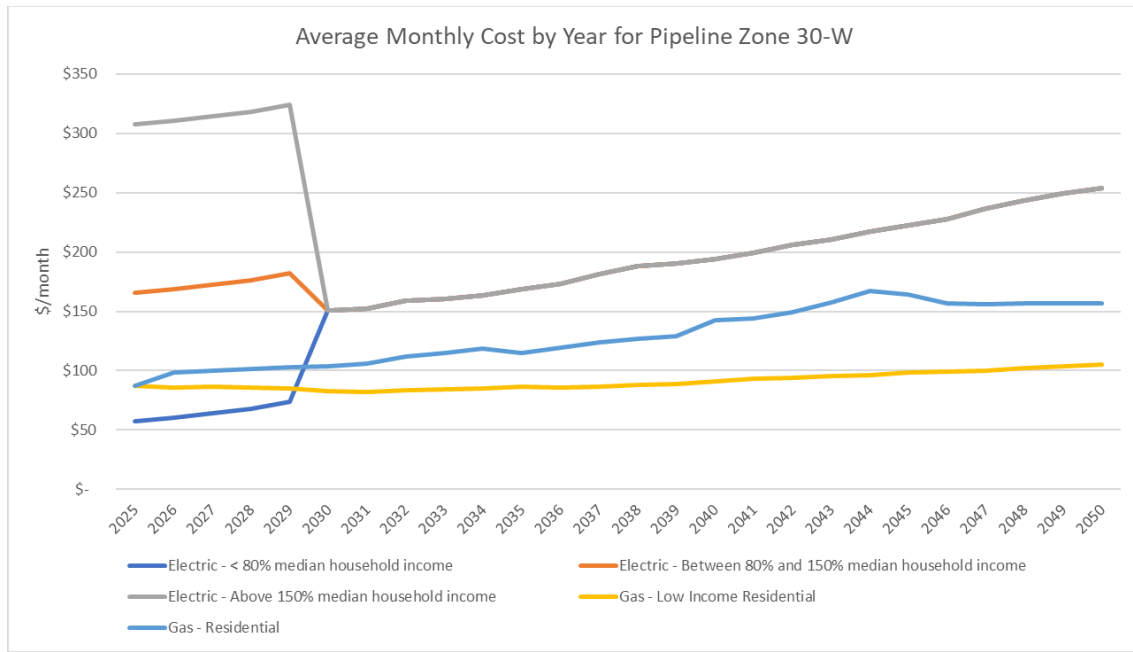
**Zone 11**

**Zone 20**

**Zone 26**



**Zone 30-S**

**Zone 30-W**

**Zone ME-WA**