



**TRI-STATE**

Generation and Transmission  
Association, Inc.

A Touchstone Energy Cooperative



# Resource Planning

*A Balanced Approach*

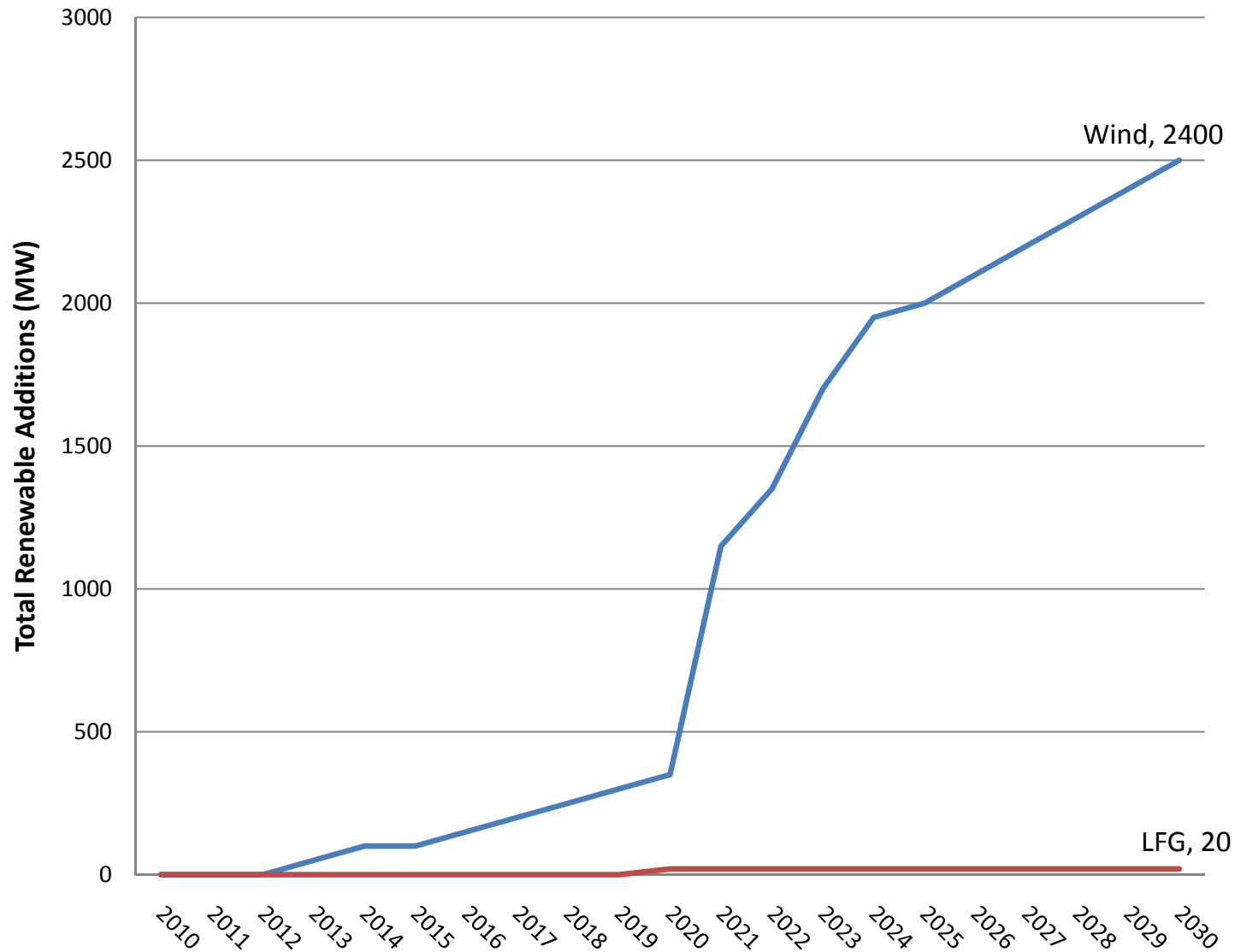
**High Coal Scenarios**



# BDS – 10% Coal \$ Increase

Scenario Attributes and Assumptions	
Growth Rate	Median
DSM level	Low Level
Electric price	Median
Gas price	Median
Coal Price	Increases by 10% annually
RPS level	Compliance
Renew. Integration Cost	\$5
Carbon Cost Adder start 2015 escalating 5% /year	\$20
Plant lives	40 years
Planning and Op. Reserves	15%

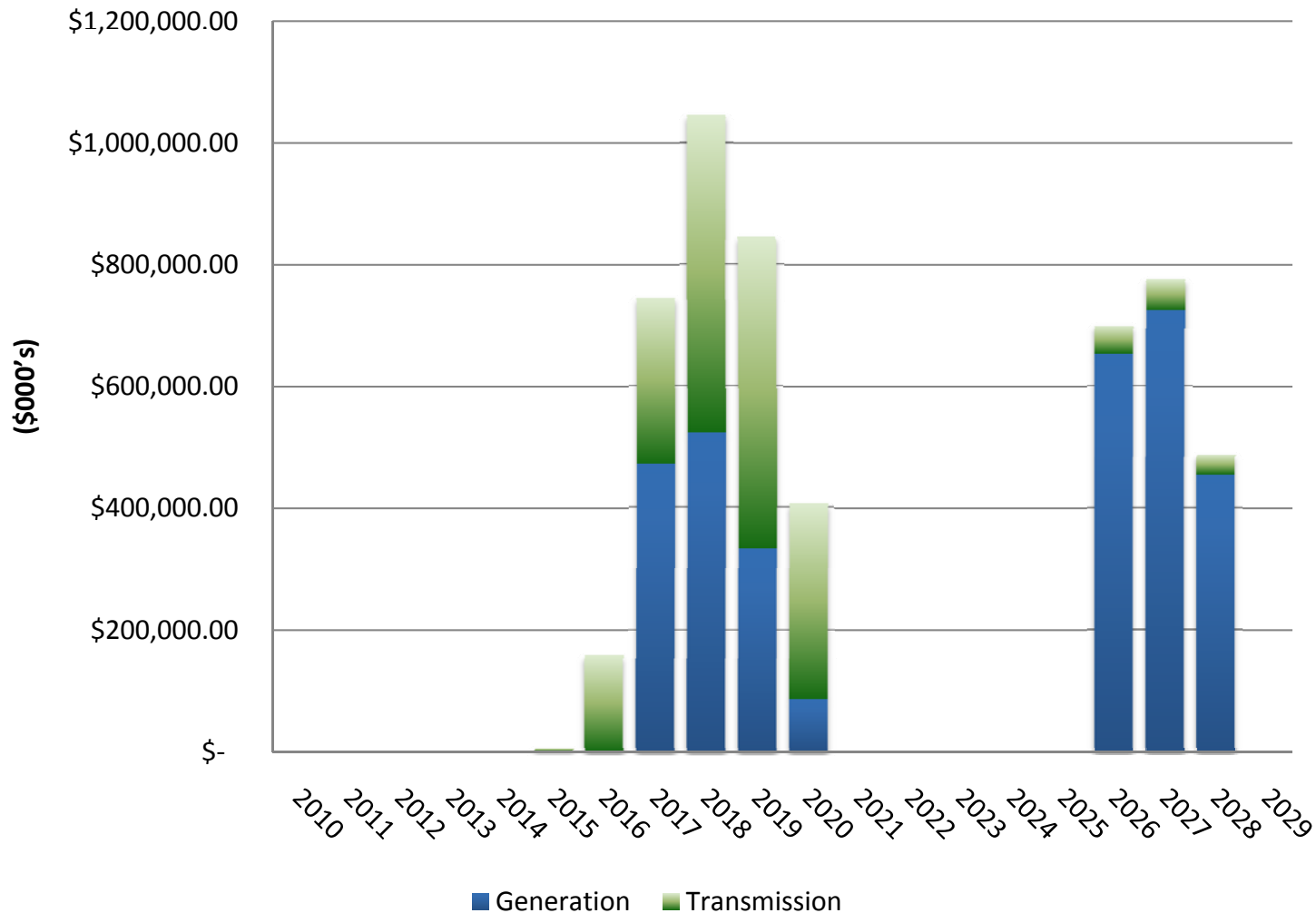
# BDS 10% Coal \$ Increase— Renewable Energy Additions



## Additions

- 2013 – 50MW Wind
- 2014 – 50MW Wind
- 2016 – 50MW Wind
- 2017 – 50MW Wind
- 2018 – 50MW Wind
- 2019 – 50MW Wind
- 2020 – 50MW Wind
- 2021 – 800MW Wind
- 2022 – 200MW Wind
- 2023 – 350MW Wind
- 2024 – 250MW Wind
- 2025 – 50MW Wind
- 2026 – 100MW Wind
- 2027 – 100MW Wind
- 2028 – 100MW Wind
- 2029 – 100MW Wind

# BDS 10% Coal \$ Increase – Capital \$ (Major Projects)

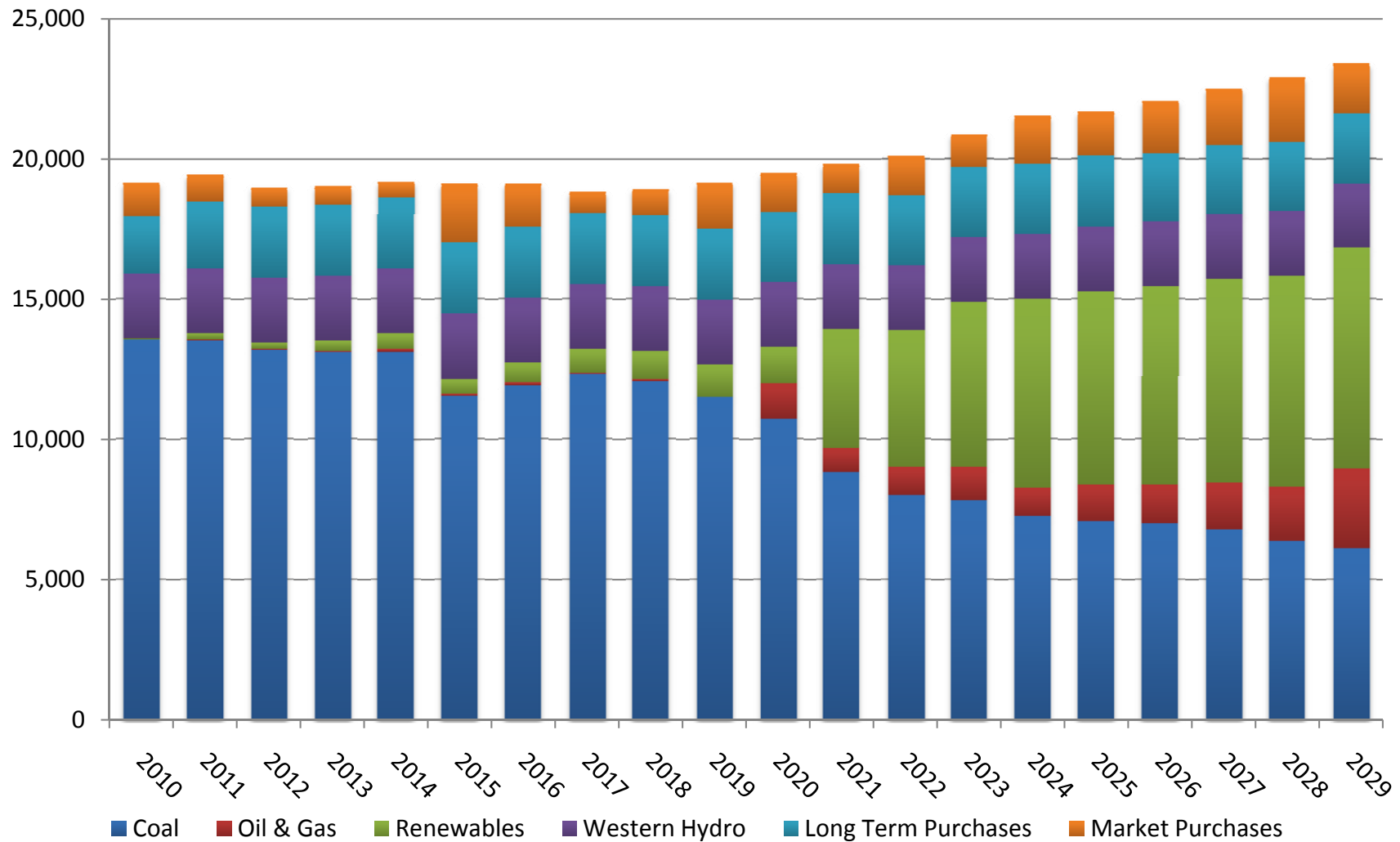


## Major Projects

2020- 2x1 CC, 588MW  
Total Capital Cost =  
\$1,327,279,000

2029 - 2x1 CC, 588MW  
Total Capital Cost =  
\$1,833,193,000

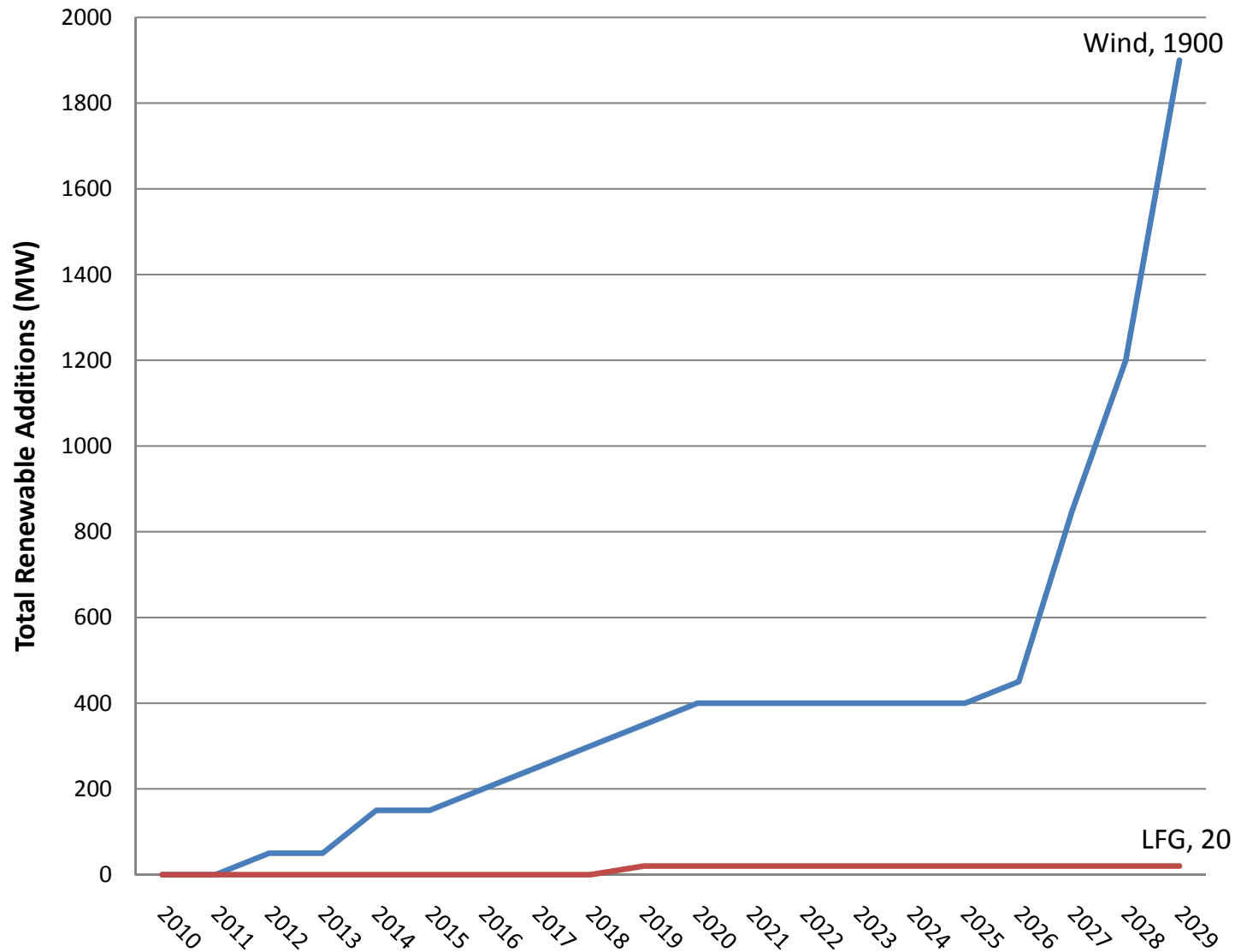
# BDS 10% Coal \$ Increase - Generation by Fuel Type



# BDS – 5% Coal \$ Increase

Scenario Attributes and Assumptions	
Growth Rate	Median
DSM level	Low Level
Electric price	Median
Gas price	Median
Coal Price	Increases by 5% annually
RPS level	Compliance
Renew. Integration Cost	\$5
Carbon Cost Adder start 2015 escalating 5% /year	\$20
Plant lives	40 years
Planning and Op. Reserves	15%

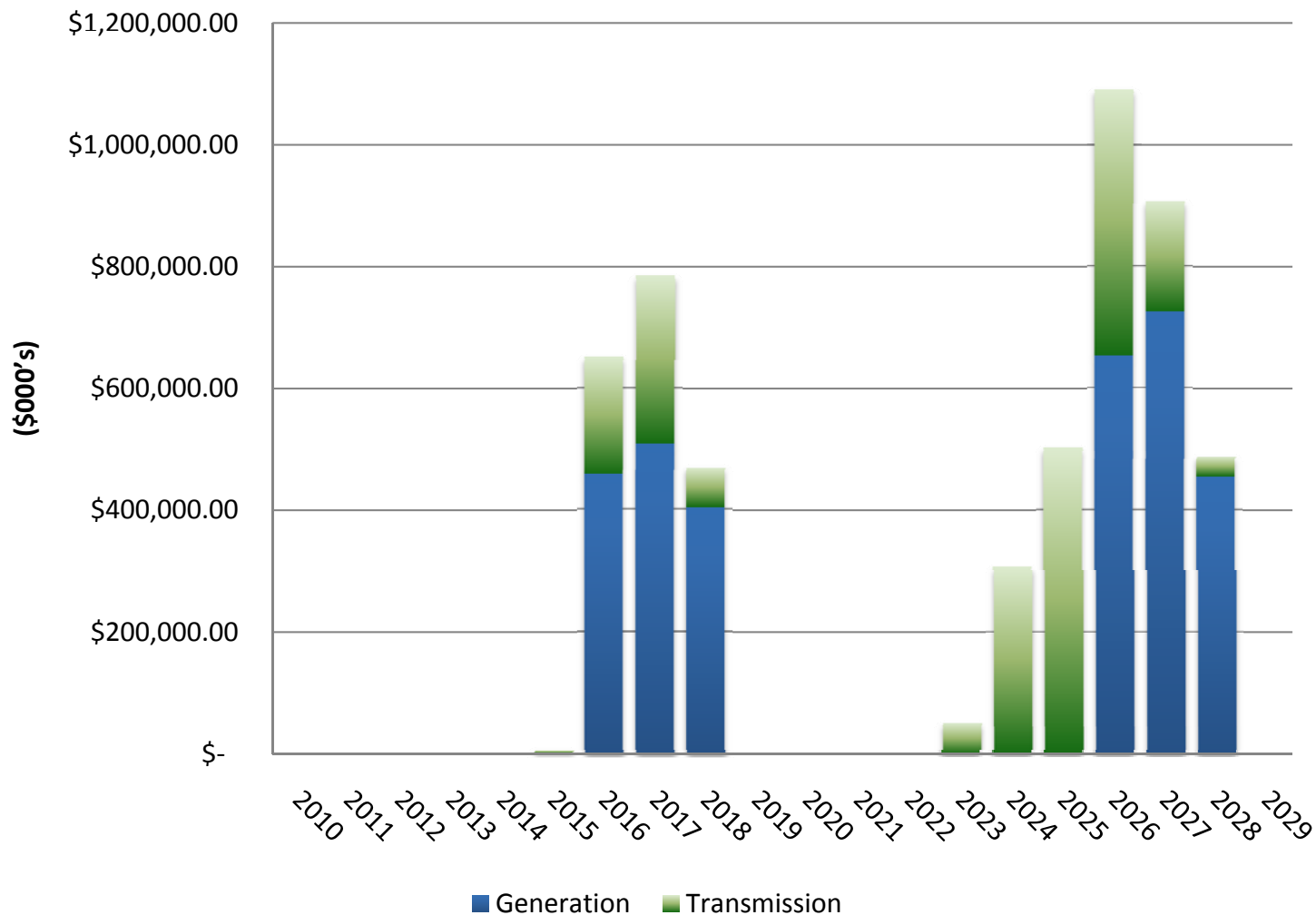
# BDS 5% Coal \$ Increase— Renewable Energy Additions



## Additions

- 2012 – 50MW Wind
- 2014 – 10MW Wind
- 2016 – 50MW Wind
- 2017 – 50MW Wind
- 2018 – 50MW Wind
- 2019 – 50MW Wind
- 2020 – 50MW Wind
- 2026 – 50MW Wind
- 2027 – 400MW Wind
- 2028 – 350MW Wind
- 2029 – 700MW Wind

# BDS 5% Coal \$ Increase— Capital \$ (Major Projects)

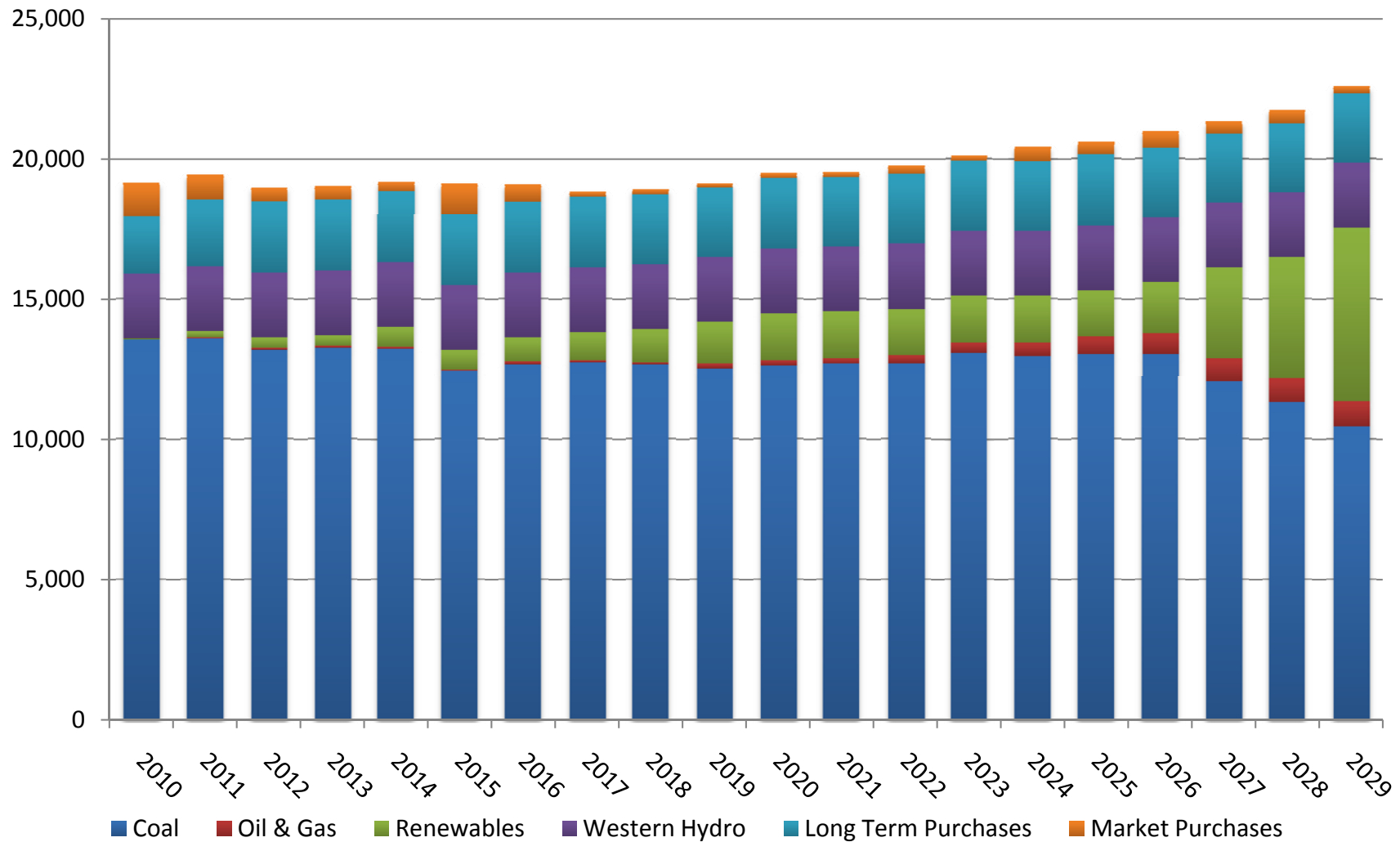


## Major Projects

2019- 2x1 CC, 588MW  
Total Capital Cost =  
\$1,288,620,000

2029 - 2x1 CC, 588MW  
Total Capital Cost =  
\$1,833,193,000

# BDS 5% Coal \$ Increase— Generation by Fuel Type



# PVRR By Scenario

