

North Carolina Ratepayer Savings from Solar

Synapse analyzed ratepayer bill impacts from solar installations driven by Senate Bill 3 (SB3) and the Public Utility Regulatory Policies Act (PURPA) in North Carolina since 2007 and forecasted savings through 2035.

Key Takeaway

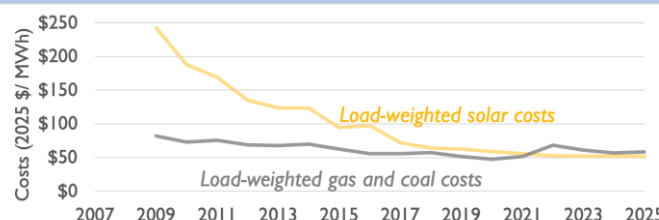
Solar has become cost-effective over time and has saved North Carolina ratepayers \$339 million since 2022. Solar may save ratepayers \$2.4 billion over the next 10 years.

Solar has become cost-effective over time, with ratepayer savings starting in 2022

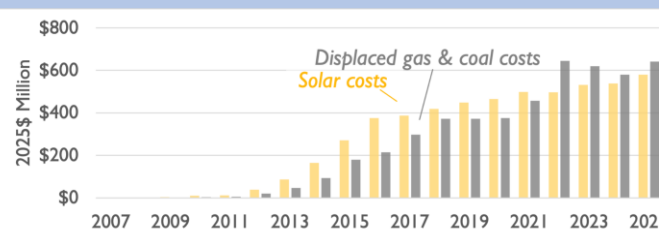
- Over 2007–2025, solar had net costs of \$401 million, becoming cost-effective in 2022
- As solar installations grew starting in 2009 to over 6 GW by 2025, the cost of solar decreased on average by five percent every year
- Generation from solar increased, displacing gas and coal generation, which has been subject to increased price volatility due to supply chain and geopolitical factors
- Since 2022, solar has saved ratepayers \$339 million and has been cheaper per MWh than the gas and coal that would have taken its place

This translates to annual savings of \$38 million across residential customers and \$47 million across commercial and industrial (C&I) customers

All-in solar compared to gas and coal costs (\$/MWh) by year



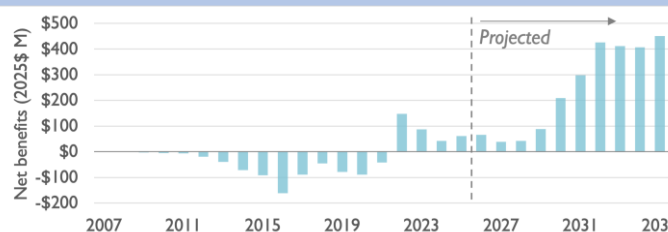
All-in solar compared to gas and coal costs by year



Solar may save ratepayers \$2.4 billion over the next 10 years

- To meet Duke Energy's Advancing Development load forecast and an extension of the Clean Energy and Energy Efficiency Portfolio Standard (CEPS), utilities would need to procure 4 GW of new solar per year
- We found that procuring this solar would be cheaper than the gas and coal alternative by \$2.4 billion dollars over the next 10 years
- Our analysis indicates that a smaller amount of solar built would also be cost-effective

Net savings by solar per year



Adding 4 GW of solar per year may save residential customers \$77 million and C&I customers \$167 million annually

Background

NORTH CAROLINA'S SOLAR POLICIES

- PURPA** requires utilities to purchase energy and capacity from approved generators at avoided cost rates
- SB3** in 2007 required Duke to meet a percentage of retail electricity sales with renewable energy by creating a Renewable Energy and Energy Efficiency Portfolio Standard, which is now CEPS
- North Carolina** has a 2050 carbon neutrality target