

Grid Transformation and Security Act of 2018

SB 966 (Wagner), SB 967 (Saslaw) and HB 1558 (Kilgore, Bagby)

1

Refunds and rate reductions over the next eight years for customers totaling more than \$1 billion (beginning 7/1/2018)

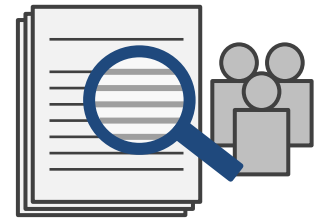
- \$133 million one-time bill credits based on SCC report
- \$740 million rate reductions achieved through elimination of certain existing riders
- At least \$100 million annually in tax savings, with additional subject to SCC proceeding; will ensure 100% of savings are passed onto customers



2

State Corporation Commission (SCC) oversight

- Returns oversight of base rates and establishes triennial reviews
- Adds SCC reviews before and after grid transformation investments are undertaken



3

Grid transformation investments (see appendix)

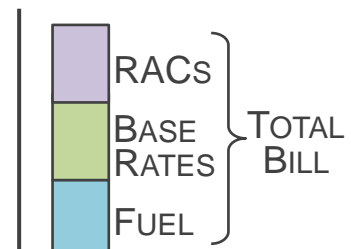
- Modern infrastructure for reduced power outages and faster power restoration time
- Wind, solar, energy storage, energy efficiency
- Investments; *not* routine maintenance



4

Reduces future riders (also known as RACs or surcharges for new projects)

- Before future rider charges can be added for investments approved pursuant to this act, SCC will determine if there were overearnings
- If there were overearnings, SCC determines by how much future riders should be reduced as a result



5

Expands EnergyShare program through 2028

- Continues providing bill payment assistance and energy efficiency upgrades to low income, elderly, disabled, and veterans

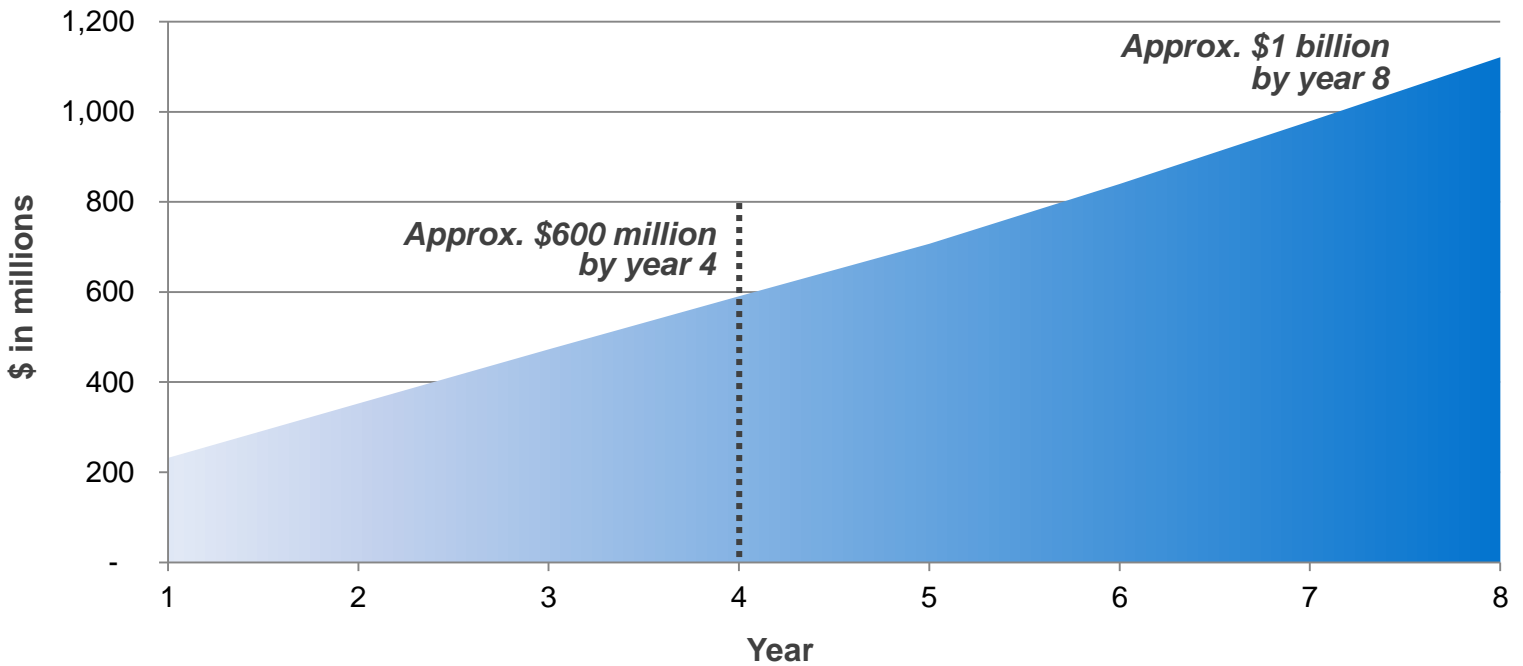
EnergyShare

Grid Transformation and Security Act of 2018

Cumulative refunds and rate reductions for customers totaling more than \$1 billion.

Estimated Cumulative Savings for All Customers

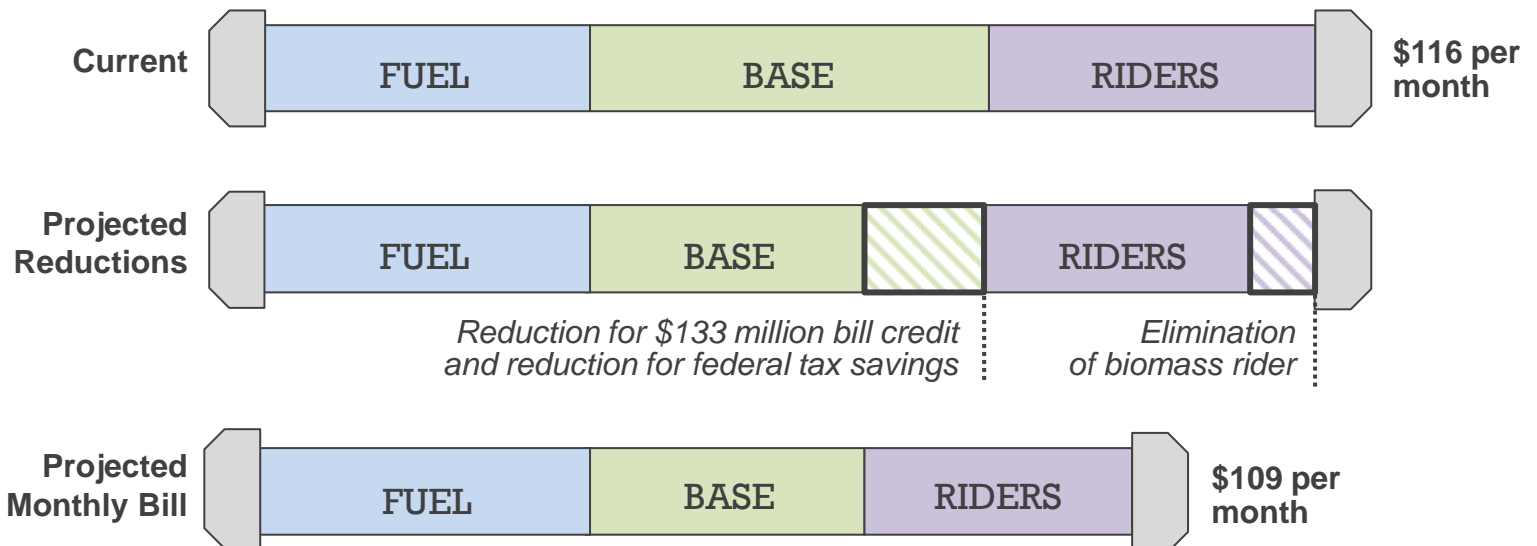
(*Assumes federal tax help occurs in perpetuity and no other rate changes occur*)



* Factors such as weather, fuel, and environmental compliance costs may result in rate changes if approved by the State Corporation Commission.

Sample Residential Bill Reduction

(example: 1,000 kWh usage)



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Appendix – Investment Outcome Examples

Designed to reduce outages or restoration times, secure energy assets, enhance tools available to customers, and increase investments in renewable generation.

Reliability investments such as equipment which ...

- Automatically reports outages when they occur
- Allows prevention of certain outages before they occur by predicting them and dispatching crews to equipment nearing failure
- Isolates outages so fewer customers are impacted
- Reduces voltage fluctuations and improves power quality for industrial and other customers with equipment at risk of tripping
- More precisely dispatches crews to get power restored more quickly
- Enables automated rerouting and restoration of service
- Better accommodates integration of renewable generation
- Includes energy storage systems and microgrids
- Includes strategic undergrounding of outage-prone lines

Security investments such as ...

- Cybersecurity measures
- Physical security and grid hardening measures

Efficiency investments such as ...

- Energy efficiency and conservation tools for customers to better understand and manage energy use (paired with smart meters)
- Extension of EnergyShare energy efficiency investments for low income, elderly, disabled customers and military veterans
- Electric vehicle support infrastructure
- LED streetlight conversions

Renewable investments such as ...

- Large and small-scale solar, including expansion of rooftop leasing solar program
- Large-scale wind projects
- An energy storage pilot program
- Pumped hydroelectric storage facilities



Distribution Grid Modernization – Transformational Change

TODAY'S ENERGY GRID

TRANSFORMED GRID

<p>Smart Meters (Advanced Metering Infrastructure - AMI)</p>	<ul style="list-style-type: none"> • Current meters provide limited information to utility and customer – Dominion Energy does not know if your power is out • Truck rolls and site visits required for metering and service orders 	<ul style="list-style-type: none"> • 100% fully deployed AMI allowing us to better understand/respond to customer needs • New and more frequent data, including outage awareness – we know when your power is out • Remote meter reading and service connections – immediate response to turn-on/turn-off requests
<p>Customer Tools & Applications (New Customer Information Platform)</p>	<ul style="list-style-type: none"> • Limited system functionality to provide new/updated customer service options • Systems not easily adaptable to changing energy market • Does not allow proactive customer engagement 	<ul style="list-style-type: none"> • New tools to allow a 360-degree view of the customer experience – billing, payments, work orders, outages, etc. • Real-time information that promotes enhanced communication and affordability • Customer access to more communication channels through self-service options • Enables new service offerings, bill and payment options, and implementation of advanced rates
<p>Self-Healing Grid (Intelligent Grid Devices, Automated Control Systems)</p>	<ul style="list-style-type: none"> • Operating system designed for one-way power flow • Limited deployment of automation and monitoring 	<ul style="list-style-type: none"> • Automated devices and controls that isolate outages and reroute power when needed – fewer outages and faster restoration • Real-time situational awareness from thousands of new intelligent devices that enable an adaptive grid
<p>Grid Resiliency (Hardening for circuits and substations)</p>	<ul style="list-style-type: none"> • Grid originally designed for only one-way power flow • Today's grid design standards not aligned to meet future expectations 	<ul style="list-style-type: none"> • Grid will have new robust design standards to better prevent and recover from events • Provide more grid capacity and communications infrastructure to support self-healing grid
<p>Physical & Cyber Security (Hardening at substations, secure communication networks and devices)</p>	<ul style="list-style-type: none"> • Not "Digital Ready" • Limited physical protection for key assets 	<ul style="list-style-type: none"> • Two-way communications over a secure network • Secure networks enable a digital grid – ready for new and emerging technologies • New standards for physical protection of critical infrastructure
<p>Adaptive to Renewables (Distributed Generation - DG)</p>	<ul style="list-style-type: none"> • Grid originally designed for one-way power flow – renewables are creating two-way power flow • Limited monitoring of DG impact to customers • DG interconnection process & tools has limited scalability to support future growth 	<ul style="list-style-type: none"> • Integrating renewables while leveraging DG benefits and ensuring safe and reliable service to all customers • Streamlined distributed generation interconnection process – implementing new systems to improve customer experience
<p>Predictive Analytics</p>	<ul style="list-style-type: none"> • Analytical efforts are largely reactive and focused on single processes • Insufficient data sets 	<ul style="list-style-type: none"> • "Digital Grid" provides predictive capabilities to efficiently plan and operate power grid • Real-time data enables better decision making, modeling, and predictive analysis – better capability of intervening before an outage or event occurs
<p>Embracing Future Innovation (New technologies, EVs, LED streetlights, storage)</p>	<ul style="list-style-type: none"> • Grid is a product of decades of traditional services and technology • Lacking experience in some emerging technologies 	<ul style="list-style-type: none"> • Demonstrating and incorporating new technologies such as battery storage • Improving public safety and energy efficiency with LED streetlight deployment • Partnering with communities for infrastructure enhancements such as smart street lighting and electric vehicle charging to support community sustainability