

VIRGINIA ENERGY PLAN

Energy Efficiency Subcommittee

July 18, 2018

Background on Virginia Energy Plan

2014 VEP Recommendations and Outcomes

- Formation of Governor's Energy Council (Executive Order 16) and Executive Committee on Energy Efficiency (2015)
- Established policy goals to meet Virginia's 10% voluntary energy conservation target
- Established Lead-by-example 15% reduction goal for state facilities (Executive Order 31)
- Enabled Commercial Property Assessed Clean Energy (C-PACE) Programs (2015)
- Established VirginiaSAVES Green Communities Program to utilize Virginia's allocation of Qualified Energy Conservation Bonds (Executive Order 36)

Background on Executive Committee

- Governor's Executive Committee (GEC) on Energy Efficiency
 - Defined Virginia's 10% voluntary energy conservation target
 - DMME obtained 2015 \$300,000 State Energy Program (SEP) grant to develop Energy Efficiency Roadmap
 - DMME obtained 2016 \$500,000 SEP grant to establish Mid-Atlantic PACE Alliance (MAPA) to advance Commercial Property Assessed Clean Energy (C-PACE) Programs in Virginia, Maryland and DC

Energy Efficiency – 15 % Conservation Goal

- Executive Order 31 identifies energy efficiency in state government as a priority (October 2014)
- Identified Energy Performance Contracting (EPC) as a valuable tool for state agencies to take a comprehensive approach to reducing energy consumption in state buildings
- Established a goal of reducing state government electricity consumption by fifteen percent by the end of 2017, using 2010 electricity usage as the baseline
- The goal was confined to executive branch agencies, excluding higher education except for the community college system
- The 15% public sector energy conservation goal contributes to the voluntary 10% goal to reduce Virginia retail electricity consumption by 2022

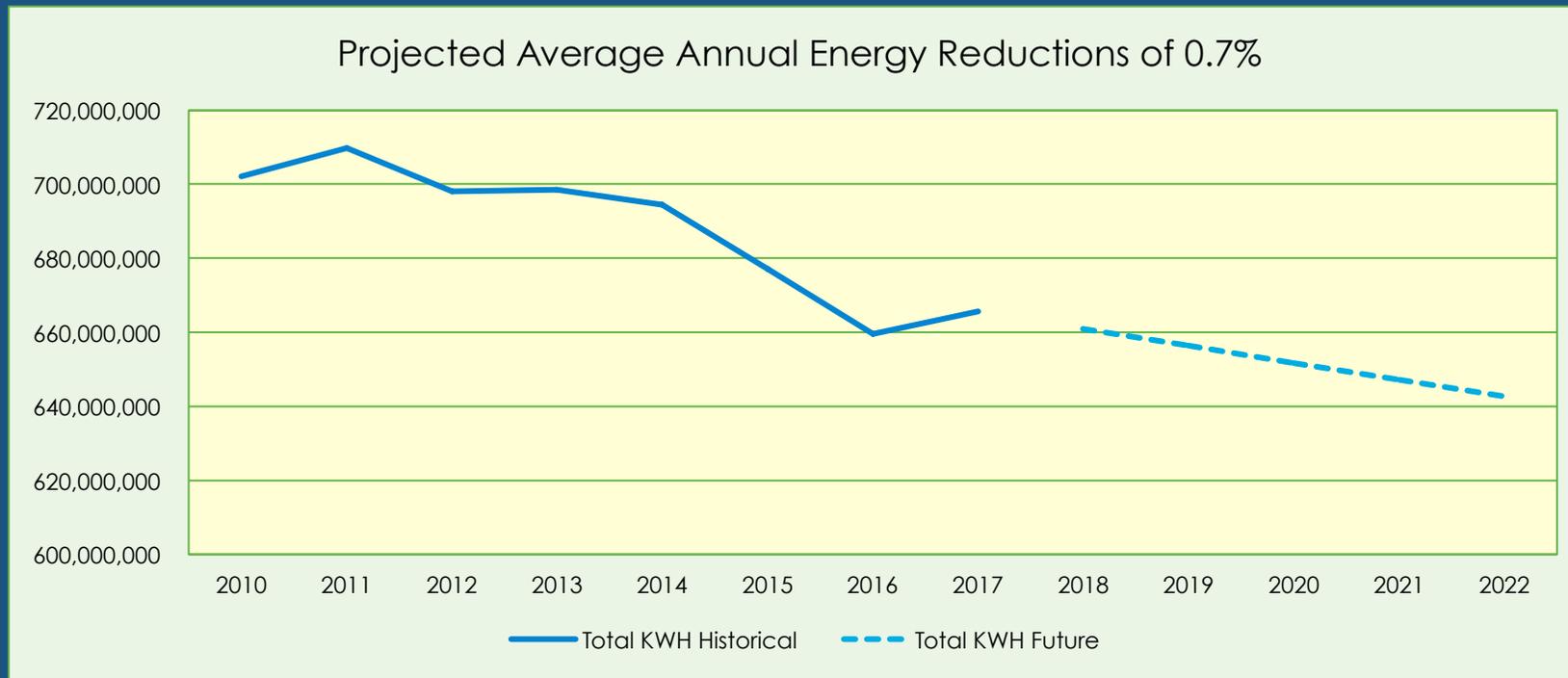
Energy Efficiency – 15 % Conservation Goal

- Estimated KWH Avoided via EPC
 - EPC produced significant savings for participating agencies... but had marginal impact overall toward achieving the 15% goal
 - EPC kWh savings is approximately 1% of state agencies electric energy consumption in 2017



Energy Efficiency – 15 % Conservation Goal

3,633 Accounts	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total KWH Historical	702,113,254	709,900,196	698,113,577	698,433,145	694,429,056	677,216,881	659,486,208	665,638,516					
Total KWH Future									660,979,046	656,352,193	651,757,728	647,195,424	642,665,056
Yr-Yr Improv		-1.1%	1.7%	0.0%	0.6%	2.5%	2.6%	-0.9%	0.7%	0.7%	0.7%	0.7%	0.7%
Yr-2010 Improv		-1.1%	0.6%	0.5%	1.1%	3.5%	6.1%	5.2%	5.9%	6.5%	7.2%	7.8%	8.5%



* 3,633 Accounts is normalized for growth throughout 2010-2017

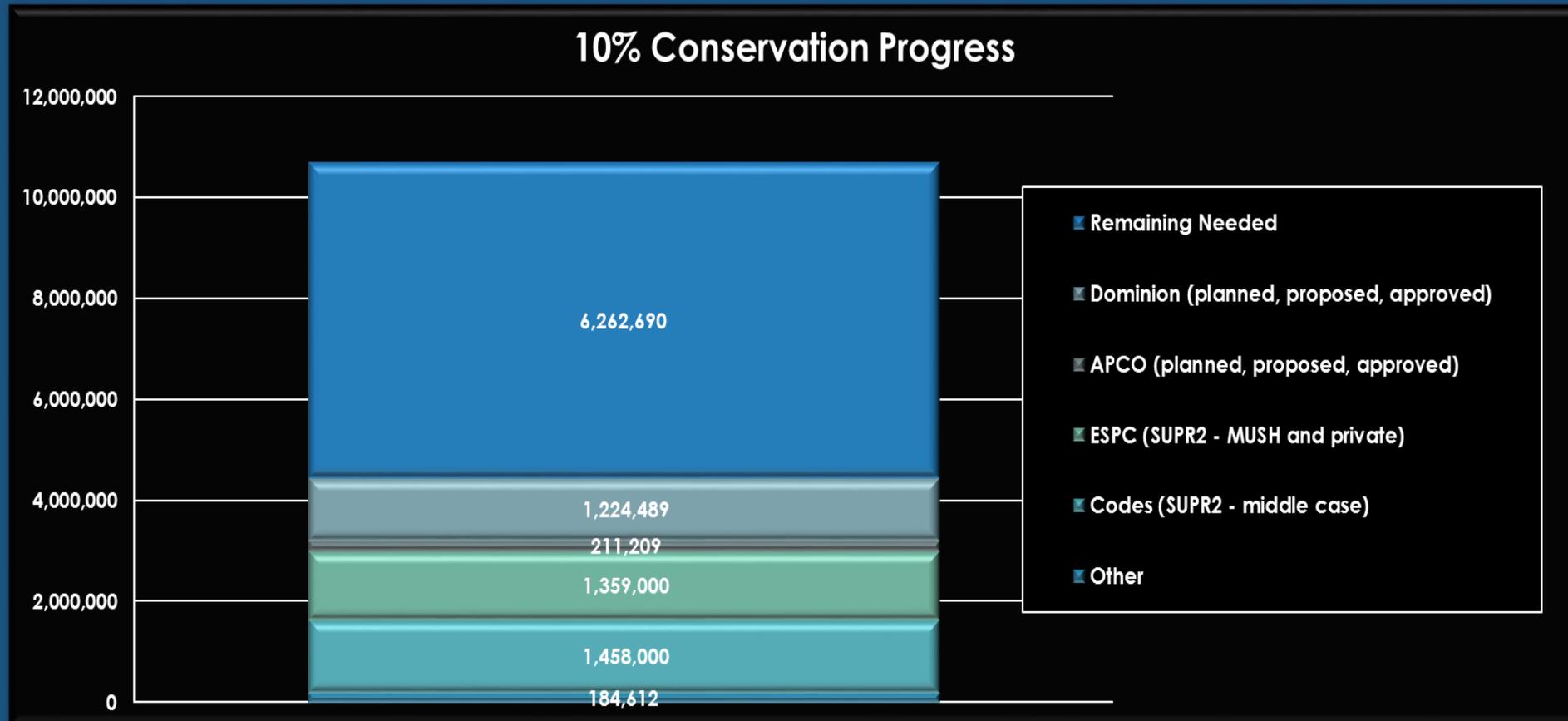
Energy Efficiency – 15 % Conservation Goal

- Challenges of goal measurement
 - Normalizing for growth
 - Increasing accounts and load fluctuations can mask gains in energy efficiency
 - EPC takes 1-2 years to implement and results can lag goals
 - Other energy conservation measures are taking place that are not tracked
- Results
 - EPC is an effective energy conservation tool
 - Other energy efficiency measures are being used by state energy managers
 - Progress is clearly being made, when normalized for growth
- Next Steps
 - Continue EPC
 - Establish energy consumption data warehouse
 - Analyze performance for best practices and reveal opportunities for improvement

Energy Efficiency Subcommittee Process

- Facilitation Structure:
 - Focus on:
 - Achieving Virginia's 10% energy conservation target
 - Lead by example strategies
 - Financing
 - Program design for DMME-funded programs
 - Facilitator: Regulatory Assistance Project
- Meeting Dates:
 - June 25, 2018: 12pm to 2pm
 - July 18, 2018 (time TBD)
 - August 1, 2018 (time TBD)

10% Conservation Goal (projected)



10% Reduction – More detail

- To be measured as total avoided 2020 electricity consumption that can be verifiably attributed to energy efficiency initiatives in 2007-2020 timeframe
- 2006 baseline year consumption was 106,700 GWh (EIA data)
- 10% target is 10.67 MWh (defined as retail sales to residential, commercial, industrial and transportation sectors)
- SB 906 (2017) requires DMME, in coordination w/ SCC, to track and report to GA on 10% goal progress
- Graph on previous slide reflects projected savings (ACEEE SUPR2 model) from energy code updates (2015 IECC); EPC activity in Municipal, University, Schools, Hospitals (MUSH) market; Dominion Energy and Appalachian Power filed 2017 Integrated Resource Plans (IRPs)
- Does not reflect newly-filed IRPs or savings projected under new EE investment requirements per SB 966

GEC Recommendations (progress)

1. Track and compile electric consumption data to measure progress to 10% goal (ongoing)
2. Outreach to local governments about value of lighting replacements (streetlights, etc.)
3. Develop single-brand strategy (EnergySense) for all energy efficiency programming (SCC, completed)
4. Recognize “champions” through awards (e.g. VAEEC Energy Efficiency Leadership Awards, VA Municipal League “Go Green Virginia”, Viridiant Sustainable Leadership awards)
5. Support legislation to enable commercial building benchmarking (DMME stakeholder process resulted in HB 204 in 2018, which would have authorized localities to establish/require benchmarking for buildings >50,000; bill failed, but may be re-introduced in 2019)
6. Develop school curriculum to educate students about energy efficiency (SCC completed development and accreditation achieved in 2018)

Stakeholder Process Updates

- For information about the full stakeholder engagement process, visit the 2018 Virginia Energy Plan web page at:
<https://www.dmme.virginia.gov/de/VirginiaEnergyPlan.shtml>

- Follow us online for updates:



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