

**Funding Workgroup Report**  
**Governor’s Climate Change and Resiliency Update Commission**  
**August 27, 2015**

**Recommendation 1: The New Virginia Bank for Energy and Resilience**

**I. Introduction**

There is a significant and untapped opportunity to help grow a New Virginia Economy: modest public investment in adapting to climate change and in technologies that reduce greenhouse gas emissions could unlock vast private capital investment across the Commonwealth. Indeed, the Governor articulated four essential priorities in the Virginia Energy Plan: (i) diversify Virginia’s economy by strategically growing the energy sector; (ii) innovate to reduce greenhouse gas emissions and lower energy consumption; (iii) strengthen Virginia’s business climate by investing in reliable and resilient energy infrastructure; and (iv) prepare Virginia’s workforce to drive the energy economy into the future.<sup>1</sup>

The New Virginia Bank would accomplish these priorities of accelerating the growth of clean energy and resiliency markets and businesses by increasing the availability of private capital, so that Virginia can finally catch up to—and surpass—other states in maturing these 21<sup>st</sup> century market sectors. Just like cars and homes, upfront financing is essential. Clean and resilient energy technologies like solar, CHP, and energy efficiency are increasingly cost-competitive and are proven to pay for themselves through reduced energy cost and risk. However, their initial deployment is still hampered by market barriers and upfront costs. Though these markets may be mature elsewhere, they are still nascent in the Commonwealth due to these financing gaps.

The key to unlocking a clean and resilient energy future in Virginia is simple: abundant and reasonably-priced capital to finance the deployment of these proven technologies, and the build-out of the businesses necessary to deploy them.

The New Virginia Bank, with modest public financing to leverage greater private financing, would drive that much-needed market growth. Through public-private financing structures, public dollars can leverage far greater private investment, while also preserving taxpayer dollars, as capital is recycled and reused until such capital markets are mature enough to grow solely with private investment.

The New Virginia Bank is a win-win-win: government wins by reducing emissions and increasing resiliency, without the ongoing expense of grants; the private sector wins because new investment opportunities are opened for investors and new businesses grow; and consumers win because they access cheaper and cleaner energy, while increasing resiliency with better financing and less upfront cost.

Here is how Governor McAuliffe can accomplish these three wins and grow the New Virginia Economy by funding a New Virginia Bank:

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<sup>1</sup> The Governor has also set out five priorities for resiliency<sup>1</sup> in the “thRIVE: Resilience in Virginia” framework described in the Commonwealth’s proposal to the US Housing and Urban Development’s (HUD) National Disaster Resiliency Competition (NDRC): (i) unite the region, (ii) create coastal resilience, (iii) build water management solutions, (iv) improve economic vitality, and (v) strengthen vulnerable neighborhoods.

**We recommend** a two-track strategy to achieve the objective of increasing investment in clean energy and resilient technologies in Virginia:

- a. **the executive approach** are executive actions available today; and
- b. **the comprehensive approach** proposes a New Virginia Bank to achieve broad market transformation, which would require significant capitalization through a G.O. bond.

**II. The Executive Approach:** use currently available funds for specific energy and resiliency projects in ways that stretch the public dollar and “crowd in” private investment.

- a. **We recommend the Governor examine the Commonwealth’s Energy Conservation Bonds (“QECBs”) allocation to better leverage private investment.** Virginia has a remaining QECB allocation of about \$75MM, of which \$20MM has been earmarked for the Virginia Green Community Program. The remaining QECB allocation should be used to create a new loan fund to support smaller clean energy projects (residential and small commercial), because these projects lack upfront financing and are in greater need of accessible, low-cost capital.<sup>2</sup>
- b. **We recommend the Governor use ARRA loan fund repayments to create a loan-loss reserve for Virginia contractors for solar projects by Dominion and others.** Of the \$10.5MM funding provided to DMME for a revolving loan fund (Energize Virginia), \$1.5MM has been repaid and is available for redeployment. This \$1.5MM and all future repayments should be used as a loan-loss reserve to facilitate bank lending for solar installation. The funds, as repaid, could provide a loan-loss reserve<sup>3</sup> credit enhancement for capital loans to the Virginia subcontractors who help build the 400 MW of solar for Dominion in the next 2 years or who build smaller, distributed systems.
- c. **We recommend the Governor develop a program to allow property owners to finance resiliency upgrades through their property tax bills (“PACE for Resilience” program).** Virginia should develop a PACE for Resiliency program to allow commercial and residential property owners to finance retrofits, such as elevating flood-prone buildings, installing temporary flood shields or moving vulnerable equipment to higher ground. The costs would be abated by reductions in insurance premiums.<sup>4</sup>
- d. **We recommend the Governor use \$4MM of DMMS Alternative Fuel Vehicle (“AFV”) funds to help local and state agencies convert fleets to electric or natural gas vehicles.** The funds, part of Energize Virginia, should be used to cover the increased cost of purchasing (above the price of a conventional vehicle) AFVs and fueling infrastructure for state and local governments. The loans from DMMS to government agencies should be structured specifically to be paid for by the operating budget savings on fuel; payments

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<sup>2</sup>This QECB loan fund approach has been used elsewhere in the country to great success, and is an effective means for drawing in private capital for underserved markets. *See, e.g.*, the [St. Louis Energy Efficiency Loan Program using QECBs](#).

<sup>3</sup>A loan-loss reserve fund could help subcontractors without strong balance sheets access the working capital they need. Connecticut has a similar program, providing working capital to help installers cover the capital cost of solar panels and other costly equipment until installers receive payment from customers.

<sup>4</sup>The San Francisco Seismic Retrofit program—which applies the PACE framework to finance seismic retrofits in addition to clean energy investments—is a similar program in place that has key components that would be useful guides for creating a program for coastal Virginia. *See* <http://www.sfgsa.org/index.aspx?page=6570>.

would vary as the price of fuel varies, since the ARRA funds, unlike QECBs, are very flexible in repayment structure and timeline.<sup>5</sup>

- e. **We recommend the Governor, in order to better generate an ongoing pipeline of public/private clean energy, energy efficiency, and resiliency projects, appoint from staff an Energy and Resiliency (“E&R”) finance officer for the Commonwealth.** The officer would streamline the Commonwealth’s ability to eliminate financing gaps, by overseeing E&R finance and marketing throughout the entire Commonwealth government, with a view to leveraging maximum private investment. The new E&R finance officer would: streamline disparate efforts among agencies; initiate E&R projects and programs; secure financing for these endeavors from Commonwealth sources, federal government, or the private sector; and keep the public informed.
- f. **We recommend utilizing Virginia Energy Sense funds to provide a web-based portal to provide consumers access to clean energy and energy efficiency finance materials and programs.** Ultimately, such a portal would inform Virginians about the available technologies and financing options and, in this way, strengthen demand for and access to these technologies.

### III. Comprehensive Approach: Transform Markets through the New Virginia Bank.

**We recommend the Governor create a New Virginia Bank for Energy & Resilience,** a dedicated state financing institution that leverages private capital by working in partnership with investors.

The Bank, fully capitalized through a G.O. bond, is a solution based on highly-successful public-private partnership models deployed in other states. Rather than a piecemeal approach of using funds scattered about government agencies, the Bank is a purpose-built institution with its own source of capital to leverage private investment. The Bank would operate efficiently in coordinating market activity across clean energy and resiliency programs, designing holistic market solutions, and more directly engaging with private investors seeking to enter Virginia’s untapped markets. And because the Bank would provide loans, rather than grants, all public capital invested in the Bank would be preserved and continually recirculated into the economy.

**New Virginia Bank objectives:** Due to space constraints, we do not discuss all the details of creating and executing the New Virginia Bank: there are a great many similar state banks already operating, and a host of institutions with capacity to facilitate the creation of a New Virginia Bank.

Overall, the Bank would have **three primary objectives**, which in unison would transform Virginia’s markets for clean energy, energy efficiency and resiliency:

- a. *Provide a range of financing tools and structures that leverage private capital and attract investment to underdeveloped energy and resiliency markets. As described*

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<sup>5</sup> Other ARRA grantees such as the City of New York have successfully used ARRA funds to capitalize institutions that are still making clean loans today. The NYC Energy Efficiency Corporation (NYCEEC) was initially capitalized with \$37.5 million received by NYC through two federal ARRA grants earmarked for energy efficiency. NYCEEC has raised capital from other sources as well and has financed \$50 million in clean energy projects. See <http://nyceec.com>.

above, many clean energy projects are low-risk and economically viable, yet unable to find upfront financing. Such projects include residential sector projects, like solar & efficiency; commercial sector projects, like solar & whole building upgrades; or larger institutional or infrastructure projects, like micro-grids, CHP, and facility hardening. Public-private financing solutions increase the availability of long-term and reasonably-priced capital;

- b. *Expand the availability of financing by partnering with local financiers* to accelerate development of appropriate underwriting criteria & financing structures, to take advantage of the opportunities presented by clean energy and resiliency-focused financial products;
- c. *Spark the technology demand necessary to achieve the economies of scale* that significantly reduce costs, and thus build out the supply-side of the market, offering financing tools to the contractors & installers that must grow in order to transform markets.

**New Virginia Bank activities:** In accordance with successful models in other states, the Bank’s specific financing activities would likely focus on: co-lending, subordinated debt, credit enhancements, bundling small loans for private sale, and conventional financing tools often applied to more traditional technologies.<sup>6</sup> Here is how each Bank activity functions to unlock private investment:

- a. *Co-lending:* a public entity invests directly in a project in partnership with one or more private investors. The public lender can fill any financing gaps not covered by private investors and reduce the overall interest rate to the borrower.
- b. *Subordinated Debt:* a loan or security that is less senior than other forms of debt, therefore getting repaid only after the senior investors are repaid. If the New Virginia Bank held subordinated debt, this increases the likelihood of repayment for private senior investors.
- c. *Credit enhancements:* reduces the repayment risk for a private lender who has invested in a project. Credit enhancements provide collateral or other forms of assurance to a lender that it will be compensated if the project loan is not repaid. One example is a loan loss reserve.
- d. *Bundling:* gathering a pool of assets, usually a group of small and illiquid assets that are unprofitable when sold individually.
- e. *Conventional financing:* loans and leases applied to energy efficiency and resiliency.

Through these mechanisms, the Bank would likely leverage 5 to 10 private dollars for every one public dollar of investment, as already seen elsewhere in more mature state banks. Through these techniques, Connecticut’s bank has increased total clean energy investment in the state over ten-fold, in 4 years. Many other states have taken notice and created similar institutions, including in New York, the New Jersey Energy Resilience Bank, and the Rhode Island Infrastructure Bank. These banks are benefiting from the successful example of Connecticut

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<sup>6</sup> For more details on these tools, see [“State Banks for Clean Energy”](#) and [“The Role of Clean Energy Banks in Increasing Private Investment in Electric Vehicle Charging Infrastructure.”](#)

and are on track to replicate its success. For example, New York's bank has a capital pipeline in excess of \$350 million, and, based on this success, in July 2015 the New York Public Service Commission approved an additional \$150 million of capital for the bank.

**Bank capitalization:** The Bank would be capitalized with public funds. These funds would ideally originate in a G.O. bond, or through the budgetary process or existing funds.

Just as importantly, significant federal resources are also available to be utilized, and the federal Administration has consistently voiced its intent to fund state banks as soon and as robustly as possible.<sup>7</sup> Such funding streams include: the DOE Loan Program Office; the USDA Rural Utility Program; HUD NRDC grant funds; FEMA Pre-Disaster Mitigation Grants; federally-backed Qualified Energy Conservation Bonds; federally-backed Clean Renewable Energy Bonds; and the federal EPA.

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## **Recommendation 2: Make commonsense adjustments to existing state programs.**

- A.** **We recommend** that the Governor direct the Department of Conservation and Recreation to continue work with local Soil and Water Conservation Districts to vigorously prioritize, through enhanced cost-share, the increased adoption of those agricultural best management practices that most reduce agriculture's fuel and fertilizer consumption and associated greenhouse gas emissions and that provide methods for increasing carbon sequestration on Virginia's agricultural lands. The G.A. should provide adequate and consistent funding to the Natural Resources committed fund to further implement this recommendation.
- B.** **We recommend** that all state discretionary funding programs foster a policy that infrastructure projects receiving state funding are designed to be resistant to climate change impacts over the projected life of the project, through incentives. For example, the Stormwater Local Assistance Fund (State budget item 363 C.1 and C.2) grant program should prioritize for funding local government projects that address cost efficiency, commitments related to reducing water quality pollutant loads, and resiliency. Resiliency investments through WQIF funds should be explored for such use after 2022, provided all TMDL requirements are met and all water-related infrastructure has been sufficiently upgraded.
- C.** **We recommend** that the Governor invest in restoration of three-dimensional oyster reefs to increase coastal resilience and underwater grasses to provide significant carbon sequestration. These measures would support the Governor's commitments in the 2014 Bay Agreement to restore oyster habitat and populations by 2025 and achieve and sustain 185,000 acres of aquatic vegetation Bay-wide necessary for a restored Bay, as well as tap greater NOAA and Army Corps funding streams.
- D.** **We recommend** that the Governor explore using the Opportunity Fund or other funding mechanisms as a revolving loan fund targeting the increased resiliency of coastal businesses that face higher flood premiums, to be paid off via reduced flood insurance premiums.

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<sup>7</sup> See, e.g., a recent White House [announcement](#) that provided clarity that funds may be used by state entities like the New Virginia Bank.

- E. **We recommend** that the Governor direct the Chief Resiliency officer to conduct an inventory and prioritization of assets currently at risk, so resiliency-related funding streams may be most cost-effectively deployed.
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**Recommendation 3: Fully leverage the opportunity of federal funding streams to make coastal communities, southside, and southwest national models of resilience planning.**

- A. **We recommend** that the Governor establish a funding program to incentivize landowner adoption of shoreline protection practices that emphasize use of living shorelines and avoid shoreline hardening (e.g. bulk heads, sea walls, rip rap) wherever feasible, particularly as a way of leveraging the NDRC funding and going beyond the General Permit program.
- B. **We recommend** that the Governor establish a revolving loan fund for increasing the resiliency of residences, to be repaid through decreased flood insurance premiums. Loan efficacy should be maximized by first targeting the most highly stressed jurisdictions, according to the Housing and Community Development economic distress index; second, by focusing on the homeowners most severely impacted, according to the NFIP database.
- C. **We recommend** that the Governor, in the event the NDRC grant is awarded to the Commonwealth, ensure through Executive Order that the program be a model for the rest of the Commonwealth. To maximize the funding award, the Governor should also request additional funds in the budget and any G.O. bond request.